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PART FIRST.

ORIGINAL COMMUNICATIONS.

ART. 1.—*The case of the State of Ohio* VS. *Maconnehey, tried before the Court of Common Pleas of Muskingum County, with remarks.* By W. CULBURTSON, M. D.

The indictment laid, that on the 22d day of January, 1855, David Maconnehey did, maliciously shoot, with a pistol, one Patrick Malony, with intent to kill.

In the course of the trial it was testified that their difficulty arose from Malony's dog biting the child of Maconnehey—that Malony was shot, with a pistol ball, by the defendant; the ball entering immediately beneath the malar bone, passing back and slightly outward beneath the zygoma, over the ramus of the inferior maxilla, and coming out immediately beneath the ear; that the defendant came into an open Grocery Store in day light, (mid-day) when there were other persons present, and told Malony that his dog had bitten his girl badly, and that he had come to kill the dog; said he wanted pay for a comb worth 62½ cts., that had been broken at the time the dog bit the child, which Malony promised to pay for; said "if he did not pay for it, he would take his life and the dog's too"—Malony then said again that he would pay and told him he should not have said "he would take his life"—the defendant denied that he had said he would shoot him if he did not pay for the comb, upon which a dispute arose between him and Malony as to whether he had or had not said he would shoot him; (both parties cool.) After this the defendant handed the pistol to Malony which he looked at and returned. A short time after this Malony turned to go away, when suddenly the defendant said, "dam'd if I don't have satisfaction," raised his

pistol and fired; they had been together talking about fifteen minutes. These parties had been on the most friendly terms. After the act he saw the physician who dressed the wound, asked if it was dangerous and did not then seem to be intoxicated, or to be laboring under delirium tremens. It was further shown that the defendant had purchased powder and loaded his pistol at another grocery store, publicly, where he also drank three glasses of ale in forty-five minutes shortly before committing the act. It was also testified that defendant had been in the habit of using opiates to a large amount, in the form of opium in substance, paragoric, laudanum, a cholera mixture, one-sixth laudanum, and a nostrum, styled pain-killer; also that he drank alcoholic liquors to excess, and frequently had been seen intoxicated; that he had suffered under two or three attacks of delirium tremens; that many persons had noticed his mind peculiar in its acts, and two of his physicians remarked that his memory was impaired. It was disclosed, that his accounts were generally handed in too large, and that his employers noticed a change in his manner, in the character of his work, while in their employ. It was seen too, that he was subject to delusions, and at such times was not intoxicated. He once insisted that it was 1853 when it was 1854. Several witnesses formed an opinion, from transactions with him, that he was not sane. It was said that, on Monday morning of the 22d January, he endeavored to shoot from his window, the dog while it was passing along across the street, opposite to him, with a gun; (his wife denies this, as there was no gun about the house, it having been sent some months before to a gun-shop to be repaired,) but a man coming within the range of the gun he desisted; also, that on the morning of the day on which he committed the act, he looked as though he had been up all night. When arrested he did not deny having "committed the act, nor has he since; but said the dog had bit his child and he had a right to protect it." At first he resisted, and then yielded to the warrant.

Private Testimony.—I learn from his wife that defendant began to drink, to her knowledge, in 1850, and badly in 1853; after having received an injury upon the back of his head while intoxicated; that he had always used opium in some form, and more of it, when drinking. She noticed that he was peculiar in his manners and conversation, before he received the injury upon the head; and that after this his character grew worse in every respect. She says the defendant had a brother subject to mental derangement, who is a sober man,

and regular in his habits; also that defendant had attacks of mental disease when he had not been drinking, had one of these during the week previous to committing the above act—mentions that he went to a funeral on Friday previous to the unfortunate day, when several noticed his strange actions and conversation; she knew he had not been drinking that day—he usually "spreed," did not drink regularly —she can always tell when he has been drinking—says he was jealous of her when there was no cause—that he thought two men, one his brother-in-law, the other his friend, and neither of whom reside near here, were endeavoring to kill him so that they might accomplish their designs upon her. This she first discovered in the spring of 1854—says he obtained liquor on the 21st January, and I learn from the person who furnished it, that it was whisky, and was purchased in the evening, by the defendant—says defendant shot at his little favorite son without a motive; he having a pistol in his hand remarked, "I believe I'll shoot you," and fired; but she throwing up his arm, the bullet did not touch the child.

I learn from others, and have observed that he can give no correct account of the act with which he is charged. It appears to him as a dream. At no time during his trial did he evince any concern or emotion. Sitting the while, motionless and perfectly disinterested in the proceedings. Lastly, we would add to these, the peculiarly dull expression of his eye; its contracted pupil, his frequent pulse, his inexpressible manner, his delirium, expressed to me, and to others, which have no semblance of reality.

The prosecution averred that the evidence proved the sanity of the prisoner—that the act originated in malice, was accompanied with fore-thought, and consistent preparation—that when it was done the prisoner knew *right* from *wrong*, and therefore was responsible to the law; that he could not have had the delirium tremens at that time, and that the law held him responsible for even the accidental discharge of the pistol. The defense urged, was two-fold:

1st. That the prisoner's mind had, by reason of the continued use of opiates and other anodyne stimula, in conjunction with the periodical use of alcoholic liquors, impaired his body so as to induce in him attacks of delirium tremens, and that he had such a disease when he committed the act; and furthermore, that by these various causes, his mind became, to a certain extent, insane; so that at THE time he did know right from wrong, and also, that an individ-

ual laboring under delirium tremens is not responsible, no matter how the *disease* was produced.

2d. That the pistol was so imperfect, that it might have gone off accidentally in the hands of the prisoner, and thus produced the wound.

The Judge charged the jury in substance as follows:

"That if by reason of mental derangement, the prisoner, at the time of committing the act, did not know *right* from *wrong*, he is not accountable; but if he had sufficient sense and reason to judge of the nature of the act committed, then he is responsible.

2d. "That the disease of the mind *must* be so great as to lead the prisoner to believe the criminal act was innocent.

3d. "That if the prisoner, when he committed the act, was intoxicated, he is not excused, even although he was deprived of reason and judgment by the use of alcoholic stimula.

4th. "That if drunkenness was a cause of insanity in the prisoner, and *without* the stimulus of recent drink, his mind was so far deranged as that he could not distinguish between *right* and *wrong*, (at the time of committing the act) he is not acccountable.

5th. "But if the insanity was not a permanent, morbid condition, and he committed the act while laboring under delirium tremens, caused by a recent indulgence, being sane before he drank, then is he accountable.

6th. "If, however, the insanity continues after the attack of delirium tremens, showing itself to be a permanent condition, then is the prisoner excusable.

7th. "That delirium tremens being a well known, direct effect of alcoholic indulgence, the prisoner, if he drank, and therefore became *subject to* that *disease*, and then committed the act with which he is charged, he is responsible."

The Jury returned a verdict of "guilty."

The counsel for the defendant desired the Court previous to its charging, to charge in substance, that insanity, the remote cause of which is drunkenness, is an excuse for crime, even though it be excited by the immediate drinking of liquor; or to particularize, that crime committed under the influence of delirium tremens, is not punishable.

The Court refused to charge in that sense. The defense claimed an error in the charge, and asked an appeal on it to the Supreme

Court of Ohio. The case now rests with that body to decide whether the charge be an error, and if it is, to grant a new trial.

The defendant is a fleshy and powerful man, of lymphatic temperament. He is a blacksmith, and has received a *very* limited education.

The symptoms of insanity in the defendant, before committing the act, are as follows: The peculiar bills he rendered—that he was subject to delusion when he had not been drinking—his being subject to periodical attacks of mental derangement—his character growing worse after he had received the injury on his head—his jealousy of his wife when there was no cause, and suspicioning two of his best friends as connected with his wife, in an imaginary scheme—his shooting at his favorite son without a cause, when he had not been drinking. These facts, in unison with the remarks of those who were working with him, or who employed him, or of others in whose presence he had been, that his mind was affected—was not sound—coupled with his hereditary predisposition, want of education, his habits of intoxication and opium taking, his several attacks of delirium tremens, the injury upon his head, his conduct at the trial and before and after it in the prison. These considerations render it clear that his mind had not been sound for a period of at least two years before the 22d of January, 1855. That there was in him a positive disease, which evinced itself in the acts of his mind.

If it be asked, may not all these acts have been caused by the continued use of opium, and the mind still be sane? We answer, such are not the known effects of that drug on a sound mind.

The evidence of insanity at the time he committed the act, are, we conceive, as follows: His having had an agravation of his mental disease during the week previous to the 22d of January, during which time he had not been drinking, except on Sabbath evening, the 21st of January—his want of knowledge of, and not denying the act—his inquiries as to how the patient was shortly after, and his returning home and not fleeing from justice—the fact that the ale which he drank did not intoxicate him—his going in quest of the dog to shoot it, not Malony—the want of caution in his acts in the grocery store, it being mid-day, and several persons in the store—the want of an adequate cause on the part of Malony, to provoke the defendant's anger—the sudden turning of the defendant's purpose from the biting of his child to the unimportant matter of obtaining pay for a comb worth *sixty-two and a half cents*—his original lia-

bility—the length of time they talked before he shot—his handing the pistol to Malony to look at, and learn that it was loaded—his coolness while he did so—his sudden expression "dam'd if I don't have satisfaction," when it had been offered, by him of whom he desired it—his impulsive shooting immediately thereafter—his well known destructiveness when weapons were in his hands—the inadequacy of his defense to the officers when they came to convey him to prison, "that he had a right to protect his child"—the absence of accomplices in the act—the mutual friendship of the parties, and lastly, his action subsequent to the trial. All these, it seems to us, proves the prisoner was insane at the time he committed the act.

Had he delirium tremens when he committed the act? The testimony under this head, shows that he did not appear to have this disease, shortly after the act. It also appears, that all his attacks of that disease were imperfectly developed, and difficult to detect. He had not been "spreeing" for six weeks before the 22d of January, but had drank a great deal of whisky from Sabbath evening to Monday morning, and three glasses of ale in 45 minutes, shortly before he shot Malony, showing no want of liquor, and therefore, a mere probability of that disease being present. These facts, in unison with the conviction, based on observation and authority, that delirium tremens is an extremely rare result of the use of opiates, lead us to believe it highly probable that he had not an attack of that disease when he fired at Malony.

That insanity is an excuse for crime, is a fixed fact; but that the state of delirium tremens, is an irresponsible one, is not universally admitted.

It has been decided, by the able Justice Story, in the case of Alex. Drew, for the murder of Charles F. Clark, at the May term, in 1828, of the Circuit Court of the United States, (Mason's Report, vol. v. p. 28; also, 1 Beck, p. 813) that an individual committing crime while laboring under the disease, delirium tremens, is not accountable.

This principle was again agitated before the Supreme Court of Ohio in 1829, in the case of John Birdsell, for the murder of his wife. The Court charged in substance, that if the prisoner, at the time of committing the act, new *right* from *wrong*, he was not excusable. The jury returned a verdict of *guilty*. For remarks upon this case, wherein the opinion is expressed that delirium tremens is an irresponsible state, see Dr. Daniel Drake's Western Jour. Med. and Physical Science, vol. iii, Boston Med. and Surg. Jour., vol ii, 1 Beck,

p. 308—Dean's Med. Journal, p. 588—Ray's Med. Journal of insanity, p. 464.

In the case of Theodore Wilson, for the murder of his wife, tried before the Supreme Court, in York county, Me., April, 1836, the Court held that insanity of *any species* was an excuse for crime; thus acknowledging that delirium tremens is an insane disease, and placing it in the same catagory with other derangements of the mind. The prisoner was acquitted. [Ray's Med. Jour. of Insanity, p. 462.]

This subject has been remarked upon by European writers; Orfila, among others, believing with the above mentioned authorities.

I propose to direct attention to the defense of delirium tremens, set up in this case; feeling, that, if the prisoner suffered under what is generally understood to be insanity, it is unnecessary to prove again that such condition excuses him. But first we would devote a little time to the consideration of the healthy mind. That abnormal state may be easier to detect, the mind may be divided into three parts—Natural, Supernatural and emotional. In the first we find the Will, Reason, Morality, the ground of religious belief. In the second, the Understanding, or the faculty of reflection and instinct, and in the last, we discover the PASSIONS and FEELINGS. The natural is governed by laws of cause and effect; the supernatural, by a law above this, the innate character of which we cannot liken to any known principle. The emotional may be controled by either the first or the second.

This distinction between Reason and Understanding was first advanced by Kant, and afterward maintained by S. T. Coleridge, (see Coleridge, by Shedd., vol. i, p. 246.) UNDERSTANDING is discussion—REASON is fixed. The UNDERSTANDING, in all its judgments, refers to some other faculty as its ultimate authority. The REASON, in all its decisions, appeals to itself as the ground and *substance* of their truth. UNDERSTANDING is the faculty of reflection—REASON of contemplation. Reason is indeed much nearer to SENSE than to understanding; for reason (says our great Hooker) is a direct aspect of truth; an inward beholding, having a similar relation to the intelligible or spiritual, as sense has to the material or phenomenal.

This classification places the WILL highest, the emotion lowest in the scale; and between these are found the various grades of the mind. The possession of a will brings responsibility upon its owner; but if it is not a free will, from any cause, then its possesser cannot be responsible—he is a mere THING, *ruled*. The brutes have understanding, but no reason or conscience.

According to this division it is not necessary to inquire, whether in *partial insanity* the whole mind is deranged, or if an individual faculty be only morbid; but to discover, if possible, aided by it, whether the impairment of one mental function, is enough to overcome the healthy remainder; to learn if it is necessary that a mind having various parts must be impaired in all, to destroy its normal unity of action.

Insanity is the result of *material* imperfection, either congenital or acquired. The matter which is to make FORM, may be perfect in its variety; but its presence may not be proper for the organization; or it may be unhealthy in its kind, and so not be subservient to the *forming power;* and again the forming faculty and the matter may be healthy, but some collateral condition prevents perfect growth. There are, too, immaterial causes of insanity, but these affect the mind by impairing the material through the senses, and therefore, if it be from such influence, it must be that the matter is in fault.

The disease, delirium tremens, comes from the material causes. These bring the nervous man into an artificial condition, in which the nervous system is not only blunted, but requires the continual presence of *stimuli*, in order that healthy mental action may ensue.

This disease not only affects the voluntary nervous, but also the involuntary spinal system. The organic nervous suffers collaterally, so far as the seat of the disease is concerned. These systems are all under the bane, and likewise the brain. The disease spreads from the nervous periphery centrically to the brain, which, being the fount of nervous influence, resists the malady longest; and when overpowered, produces an open attack of the disease. The disease appears in the extremities or on the surface, long before it manifestly overcomes the brain. This conclusion would seem to be verified, when we note how perfect the mental phenomena are at times, and yet, how general and active is the disease throughout the nervous system. If the brain were the seat, the mind would suffer more; then would be present more morbid brain symptoms, and the disease would not only be more fatal, but would much more frequently leave organic defects of this part.

Whatever for a long time supplants nature, weakens her by lessening her duty; and this may be continued for such a period as to permanently lower organic, and and thereby mental action. At first the changes in this disease are not permanant—the *forming power* has not yet been organically lowered—the action is only perverted—

the derangement is only temporary. The innate ability of the mind to act, is not destroyed—is not only capable of being influenced through the senses, but acts within itself. There is here exclusive mental action, but disease of the body perverts it. Selfishness is the leading characteristic, with a consciousness of inability to protect self. If there happens to be any previous deep-rooted idea implanted in the mind, and the constitution be not impaired, that may give cast to the mental action, and the individual be truly a temporary monomaniac—perception is deranged, the subject perceives, but not correctly; and reason, though she would act aright, cannot because perceptive data are wrong, and their cause in the ascendency. There is a WILL, but it is coerced—there is a conscience, but its admonitions are not heeded—there is an understanding, but the law by which it is governed is impeded and intercepted in its action.

This seems to us to be the mental condition in ordinary cases of this disease. Sometimes there are more perfect mental evolutions, and again the psycological phenomena are of a lower order than the above described. The paroxysm passes off, leaving the individual sane, but bodily, and it may be mentally, weakened. The appetite, for the cause, soon returns, and if the subject has not a sufficient WILL to resist its tendency, he is generally irreclaimable. There seems to be a depraved habitude of body, which once fully acquired, is a fixed condition, which masters the mind and leaves it swayed by APPETITE.

In insanity, if the understanding be but slightly deranged, and reason not itself affected, the individual may labor under delusions; and if reason be diseased, the understanding may be unable to correct the delusion. "A madman," it is reported, once exclaimed in a fit of anger to his keeper, "I'll murder you yet; I am a madman and they cannot hang me for it." The firing of York Minster by Martin, gave rise to a discussion in a neighboring mad house, when one of the inmates exclaimed, "he (Martin) will not be hanged, of course he will escape;" for what reason asked several; "they cannot hang him," replied the lunatic, "because he is mad—he is one of ourselves." Thus showing a consciousness of his own condition, and a reasoning power.

An instance is given of a Jesuit named Syambari, who believed himself a Cardinal. A friend was anxious to convince him of his error, and obtained a patient hearing. When he had finished, the madman replied, "either you consider me insane or rational; on the

latter supposition you do me injustice by your remonstrances; on the former, I hardly know which is most mad; I for believing myself a cardinal, or you for thinking to cure a madman by such reasonings." His reason was good; but his understanding was at fault. See Drake's Med. Jour., p. 489–491.

If the reason and understanding be sound, but the conscience ailing, the person may claim that *right* is *wrong* and *vice versa*. It is said that Birdsell, after killing his wife, felt and remarked that he was right in so doing, and that he wished he had done it nine months sooner. (Dr. Drake's paper above referred to.)

The WILL may be lacking in power, or the emotion may overpower it; while yet the individual may understand and reason too.

1st. WHEN THE WILL WAS NOT OVERCOME.—"A young lady who had been placed in a *mason de sante*, experienced homicidal disease; for which she could assign no motive. She was rational on every subject, and whenever she felt the approach of this dreadful propensity, she shed tears, entreated to have the straight waistcoat put on, and to be carefully guarded till the paroxysm, which sometimes lasted several days, passed." (Ray's Med. Jour. of Insanity, section 183.)

"A country gentleman, enjoying good health and easy circumstances, consulted Esquirol. He related that he had read the indictment of Henrietta Cornier, which, however, did not strongly excite his attention. In the course of the night he suddenly awoke with the thought of killing his wife, who was lying beside him. He left his wife's bed for a time, but within three weeks the same idea seized upon his mind three times, and always in the night. During the day, considerable exercise and occupation, preserved him from this fearful inclination. He evinced not the slightest mental disorder, his business was prosperous, he had never experienced any domestic chagrins, and he had no cause of complaint or jealousy in regard to his wife, whom he tenderly loved, and with whom he never had had the least derangement. He is sad and troubled about his condition, and has quitted his wife for fear, least he might yield to the force of his desire." (Ib. sec. 187.)

Another may be narrated. A peasant who was subject to destructive desires, generally felt the approach of his fit many hours, and sometimes a whole day before the invasion, during which time he would beg to be confined that he might not commit some dreadful deed. "When the fit comes on," says he, "I feel under a necessity

to kill, if it were a child." His parents, whom he tenderly loved, would be the first victims of this murderous propensity. "My mother," he cries out with fearful voice, "save yourself or I must kill you." When the fit is over he cries out, "now unbind me. Alas! I have cruelly suffered, but I rejoice that I have killed nobody." (Ib. section 189.

To illustrate this point there might be other cases cited, to show that the fiat of the will opposes such determined *tendencies* as the above; but we will only refer to those numerous cases of partial intellectual insanity, when determination remains unshaken in spite of the diseased intellect; the *will*, too, being itself interested in the destruction, and yet remain firm.

It may be said that it is the admonitions of the conscience which prevents the crime from being immediately enacted. To such an objection it may be urged, that conscience may admonish but cannot rule. No matter how active, if the will yields, its efforts are fruitless.

2d. WHEN THE WILL IS OVERCOME.—This may be produced from natural mental weakness, or from lack of *general* mental education, or for particular forms of education, as when, for instance, the body is trained to forms of physical exercise, without corresponding mental or moral culture; these developing the passions, and strengthening the will, only so far as the former are concerned, rendering such subject to the predominance of passion, by reason of the weakness of the will. These cases may be illustrated by the numerous examples of partial intellectual, or partial moral mania; when the tendency is not a *determination*—i. e., a WILLING; but a sudden uncontrolable impulse, when at least the will, does not keep pace with the impulse.

The law has acknowledged this species of mental disease, as may be seen from the following: "An exception to the rule of capacity to distinguish between right and wrong, is when a man has sufficient reason to distinguish as to a particular act; yet, in consequence of some delusion, the will is overmastered, if the act is connected with the particular delusion." (U. S. Dig., vol. 8, p. 221; Vol. 2, Am. Dig; Roberts vs. State, 3 Kelley, 310.)

From these facts relative to acknowledged insanity, we believe that in delirium tremens, the mind may not only be generally, but partially impaired, partly depending upon the organization of the subject. The conscience may be deranged, or the passions diseased through the feelings, and *vice versa;* and the will unable to overcome

an impulse. We cannot see why a distinction should be drawn between insanity from liquor and from any other cause. Why, when it originates from drink, it should be a responsible state, and from other influences, an irresponsible condition. It is said that delirium tremens is a well known remote effect of certain habits, and therefore, is a condition *acquired voluntarily*. This may with propriety be disputed; for it seems that most habitual drinkers do not acquire this disease; neither do they anticipate such a result; and even if they did, the call for drink! drink! places them under the liability. Again, if drinking is under the control of the WILL, the effect which sometimes follows—i. e., the induction of a disease, is not. Indeed, the individual generally acquires the disease by abstaining; so that although he may have *will* enough to remove the cause, he cannot prevent the effect.

Esquirol believed that the periodical drinker was not a responsible creature, for notwithstanding the exertion of the individual and his friends, he is compelled to drink at particular times. There are not wanting now those who accede to these views.

Dr. Rush not only affirmed that delirium tremens was a non-responsible state, but thought that the hard, confirmed drinker, was not a free agent. He recommended the appointment of guardians for the drunkard, and the establishing in every town and city in the United States, an asylum, where such might be treated and kept, until cured. (Medical Enquirer and Observer, on the disease of the mind.)

The plea of drunkenness has not been admitted as an excuse for crime in England, Scotland or France. In our country and England, this condition has ameliorated the punishment in several cases, when that state was not induced for the purpose of committing any criminal act. Then, there seems to be on the part of some, a determination to hold that because a man voluntarily drinks, that therefore he *knows* the occasional effect of that act will fall upon him—i. e., the abolition of reason for a time. Such believers would do well to consider the difference between *knowing* and *believing*.

These claim, too, (although many of them do not know it) that an indvidual whose body is beneath all the thraldom of drink, should have within him a free acting mind, which he can control. Such, if they have ever seen, have never studied the mental condition in the third, and often in the second stage of inebriation. Finally, these not only hold that a man, committing crime under the influence of

liquor, should be punished for his voluntary, but also for his involuntary evil acts; because the cause is the same in both cases, although the *mental states* are entirely different.

If drunkenness to excess be not criminally responsible, it is easy to see that delirium tremens, is a non-accountable condition—it being a characteristic disease—a state of insanity. If the individual can at will cast it off, or *allow* it again to come upon him, then is he accountable for what he does *in it*. Neither does it matter if the malady affects him for a few hours, a day, or a number of days, it is a disease engrossing his whole man for the time being, and if he commits crime while it distorts his mind, he should not be accountable for it. The ultimate punishment of the drunkard is enough, without legal stripes for its effects. Delirium tremens is a pitiable condition, and demands protection from the law, not punishment.

There is not wanting prominent legal authority, to advocate this humane principle. Says one, "whenever a man loses his memory and understanding, he is entitled to legal protection, whether such loss is occasioned by his own imprudence or misconduct, or by the act of Providence." [Blinn vs. Conn. & Pass. R. R. Co., 24 pt.]

Another holds "that the voluntary, contracted and temporary madness produced by drunkenness, is rather an agravation of, than an apology for a crime, committed during that state; but when an habitual and fixed frenzy is produced by drunkenness, the man is in the same condition as if it was contracted involuntarily." (U. S. vs. Foster, Crabbe 558, referred to in U. S. Dig. vol. 13th, 219—7 vol. Am. Dig. 1853.

Again it is said, "a fixed habitual madness which is the result of long continued drunkenness, will excuse a crime; but insanity which is the immediate result of intoxication, affords no excuse for crime." (U. S. Dig., Cornwall vs. Tennessee, and Bennett vs. Tennessee.)

It seems from these inquiries, that there are not wanting authorities who hold that delirium tremens is an insanity, and therefore an irresponsible state. It would appear too, that the law is slowly adopting this view; yet, it is strange how on the second agitation of this question in some of our Courts, that the plea should fail, when higher tribunals have adopted the humane belief.

Attention has been attracted to the assumed state of delirium tremens in this case, because it is an important question, demanding in this country increased and earnest investigation, and one we believe,

which should be considered an irresponsible state, in our Courts of Justice.

Over a quarter of a century has passed since Dr. Drake and John P. Harrison, both of this State, advocated the belief held in these lines, and which the law in some quarters admits.

The law in this matter is greatly indebted to the medical profession; and in its slow progress, on this point, is many years behind what is deemed medical truth.

But we cannot think it necessary to show that delirium tremens was the cause of the difficulty in this case. It would rather seem that the prisoner labored under a different form of insanity. This alienation was periodical and arose from his predisposition, injury and habits. His true mental condition seems to be a general impairment of the intellectual and moral faculties, united with a destructive impulse, when weapons were in his hands.

The public here are not, and never have been excited upon this case, because it believes the prisoner to be of unsound mind. It is therefore necessary for the law to satisfy society here, by punishing the act. Indeed it would only ask protection from one who, by means of mental disease, is a dangerous man.

If the plea had been raised subsequent to the act, it would look more like a slender effort of the counsel, than a convincing evidence of insanity; but when for a year past, persons of observation on coming in contact with the prisoner, have thus seen and practically felt the unsoundness of his mind, the matter is no longer a plea; it is to be viewed as a fixed fact, that should with all proper potency, influence the law.

When a man is shot down at mid-day, the people are apt to think it an outrageous act, while some consider it, if unprovoked, an insane deed; for such acts are not sanely performed at that time, or in that manner. In this case the jury thought the act more despicable than did the people. It was almost by itself in its conclusion.

Since writing the above, the Supreme Court of our State have decided that delirium tremens is an irresponsible condition, and granted another trial. It now remains to be seen whether the prisoner will become an inmate of a State Prison or of our Asylum for the insane.

JANUARY 14th, 1856.

ART. II.—*Anomalous Case of Hernia.* By Drs. HAMILTON AND MIXER, of Chardon, Ohio.

On the evening of July 6th, 1855, we were called to see Joseph Walker, (aged 27,) a laborer on the Painesville and Hudson Railroad, who, in an affray a couple of hours before, had been stabbed between the sixth and seventh true ribs on the left side, about midway between the spine and sternum, with a pocket knife, the blade of which was about one-half an inch wide and three and a half inches long. Several other cuts of minor importance had been received, but the situation of this, and the symptoms present, induced us to regard this as the dangerous wound.

There had been but slight hemorrhage, yet we found his pulse 48 per minute, respiration short and feeble, and entirely absent on the left side, but no depression of that side of the chest, and he complained of some pain along the course of the transverse arch of the colon.

The opinion given at the time and subsequently, upon the trial of the perpetrator of the wound, was that the knife penetrated the chest and passed through the diaphragm directly over the stomach.

The plan of treatment adopted was small doses of Sulp. Morphia and lemonade, to allay irritation, quiet thirst, and furnish a small amount of liquid food. This plan of treatment was continued with but little variation until his recovery, a period of two or three weeks. Early in September he met with an accident which fractured his right arm and otherwise injured his right side. From this in due time he recovered and resumed his occupation about the middle of November and continued to labor until Christmas, when, owing to some irregularities in drink and diet, he was attacked with vomiting, which continued until the evening of the 30th December, when he died.

Post-mortem, 18 hours after death, revealed the following:

The diaphragm was perforated about the centre of its left half, the orifice being about two inches in diameter. The whole of the stomach, a portion of the colon, and the entire omenteum, had passed through the wound in the diaphragm, crowding aside the heart and compressing the left lung until not more than a fifth part of it remained pervious, constituting in fact an immense hernia made up of the above organs and all of them more or less grangrenous.

This case is in some respects peculiar. But little is known concerning wounds of the diaphragm. They are in general very soon

fatal, either from their essentially mortal character, or from being received in connection with injuries of other parts, which render them so. Hence their symptoms are not well defined.

In this case there was not, at the time of the receipt of the wound, vomiting to denote injury or disturbance of the stomach. Nor was there subsequently developed anything from which we could infer this singular deviation from the normal condition.

The vomiting that occurred in connection with his last sickness, was such as indicated inflammation from excesses, rather than from strangulated hernia.

That a stomach thus dislocated and a heart thus crowded aside and compressed should be able to continue their functions in a manner consistent with vigorous health certainly partakes of the marvelous.

January 1, 1856.

ART. III.—*Rupture of the Uterus.* By N. DALTON, M. D., Logan, O.

PROF. JOHN DAWSON—*Dear Sir:* Yours of the 28th November came to hand, requesting a detail of the cases in which I had used the Chloroform. I have been so busy that it has been impossible for me to do so in season for the forthcoming number of the Journal, but as opportunity presents, will throw it together for the succeeding one. As you justly observe, the treatment is novel, and has been as successful as novel. What the modus operandi is I am unable to tell.

I have just returned from visiting one of the most heart-rending cases I ever witnessed—a Mrs. Drescher, a German lady, in her sixth confinement. She had been from Sunday morning at 4 o'clock in the hands of one of the most unmitigated botanical quacks in the State. She had hard labor up to 4 o'clock this morning, when all pain ceased and a slight hemorrhage ensued and the woman's strength began to fail as they represented. About noon they sent for me, and after detailing the circumstances, I requested Dr. Pullen to accompany me, which he did. Upon examination we found a large bony tumor at the lower part of the sacral prominence, rendering the antero posterior diameter of the pelvis about one and a half inches. This tumor was so large that we, upon first examination, supposed it to be the child's head. I again examined and found the posterior lip of the uterus anterior and above it;

following up, the uterus was found only to contain the placenta, which I removed, and following the funis, found the child to be in the abdominal cavity, the head resting on the pubis. I seized and brought down the feet, and delivered to the head with a great deal of trouble; then perforated and broke down the head, when the child was delivered. The woman survived but a few minutes after delivery. The womb was torn from the cervix to the fundus. The *botanist* told them it was a double headed child, and that he would soon succeed in delivering it; that there was no danger, they need not think of sending for any one else. When I told him the womb was ruptured, he seemed to be much astonished, and said he had felt sanguine until then, but now he was overwhelmed with sorrow. Dr. Pullen and I told him "when ignorance is bliss 'tis folly to be wise." We told Mr. Drescher his wife would die when we first saw her, but he was anxious that she should be delivered, and we accordingly so did.

I have been engaged in the practice of medicine nearly twelve years, and this was the first parturient woman I ever saw die, although I have seen many hard cases, cases that required both manual and instrumental interference, during this time have had two cases of placenta previa, both terminated successful.

ART. IV.—*Chloroform in Intermittent Fever.* By N. DALTON, Logan, Ohio.

Editor of the Ohio Medical and Surgical Journal—DEAR SIR: Some time in September last, I visited a young athletic man, laboring under an intermittent with general visceral congestion, which seemed to menace his life. I was convinced he must die unless he was speedily relieved. For promptitude, I was induced to try the internal use of Chloroform, and gave him about two drachms with a half gr. sulph. morphine. In a few seconds he fell asleep and slept soundly; his pulse, which could not be felt at the wrist, came up to about 90, full and soft, when he awoke, and to my astonishment expressed himself perfectly well. All the unpleasant symptoms had given way, nor was the cold stage followed by any feverish reaction. This all occurred in less than an hour. I was so much pleased with its effects that I concluded to test its anti-periodic pro-

perties by risking the probability of its return. From four to five weeks elapsed before it did return, during which time, and since, I have given it in the cold stage of quite a number of cases of simple intermittent, in doses varying from one to two drachms, in a little camphor water, both alone and connected with the morphine, and in every case have had the pleasure of witnessing the same prompt arrest of the disease, and in but two cases has there been any return of the ague, and in one only has there been any feverish reaction, but all are instantly arrested. I mentioned the matter to my partner, Dr. Hoffman, who has used the Chloroform in a number of cases with the same happy results; also to Dr. Pullen, who tried it on himself, with the effect of immediately arresting the chill, leaving him to feel as well as usual after an intermittent attack; but being fearful of its anti-periodic properties, took from two to three grains quinine the next day, and has not had a return of the ague since.

I will report more fully as soon as I can get time, possibly during the coming month. In the mean time, I hope you will lay this before your readers, in some shape, that it may be more generally tried. If found to be as serviceable in the hands of others as in ours, it will be of incalculable benefit both in relieving human suffering and in a monetary point of view. Should it, on the other hand, serve no other purpose than so promptly to arrest those alarming and frequent fatal congestive chills, it will do much good.

PART SECOND.

AMERICAN AND FOREIGN INTELLIGENCE.

On the Etiology of Epilepsy, and the Indications of Treatment furnished by a Study of the Causes. By M. MOREAU.

M. Moreau, as physician to the Bicetre and different establishments for the treatment of the insane, has seen much of epilepsy. He believes that the very different accounts given by authors of the amount of success attendant upon treatment, arise from different pathological conditions having been confounded together. Resembling each other much in their external manifestations, *true* and *pseudo-epilepsy* may, by hasty observers, be easily confounded. The con-

vulsion, whatever may be its character, and a more or less complete loss of consciousness, do not in themselves constitute epilepsy, properly so called. They may assume an epileptiform mask, and may depend on various morbid conditions, disappearing on the removal of these. The cause is here everything, while the symptoms are of little import.

"Under these same sympathetic forms, a special disease may be also concealed, a deep-seated modification of the nervous dynamism, a special lesion of something unknown but no less real, which is termed a *neurosity*. It is a lesion independent of the various causes which may induce its external manifestation but do not create it, since it existed without and before them, and because, to use the language of the schools, it is *essential*. Here the importance of the cause entirely disappears in presence of that of the symtomatic phenomena. We speak here of exciting not predisposing causes, which, in our opinion, are not separable from the disease itself." (tom. xviii. p. 5.)

It is the confounding essential and sympathetic epilepsy that has given rise, according to M. Moreau, to the vague and uncertain views which prevail respecting the etiology and treatment of the disease In his view of the disease, it is the predisposing causes of epilepsy that are of fundamental importance, being, so to say, the disease itself; and it is through these alone that the malady is, if anywhere, vulnerable to attack. He considers them at considerable length, and we proceed to reproduce his principal conclusions.

1. *Physiological Predisposing Causes:*

"(1) *Hereditariness.*—Of all the predisposing causes of epilepsy, the most serious and fertile, the one whose action is most certain and inevitable, attacking the majority of, or even all epileptics, and embosoming, so to say, the secret of the disease, is *hereditariness*—an expression which, in our eyes, comprises the conditions of organization in the double point of view of physiology and pathology of the ascendants and collateral relationships in which the descendants derive their predisposition. Thus comprehended, hereditariness constitutes the essential and truly fundamental part of our work. The principal source of the disease, this it is which furnishes the least vague indications, and those that are most easy of fulfillment for the prevention and cure of the disease." (tom. xviii. p. 17.)

To the term hereditariness, the author gives a far wider accepta-

tion than that generally received—the mere transmission of a similar disease from the ascendants to the descendants. He believes that any abnormal conditions of the nervous system, the precise mode of manifestation of which may differ, may prove efficient; hereditariness, indeed, resulting from such transformation of diseased conditions, playing an important part. Mere simple nervous irritability, slight convulsive movements or tics, have their hereditary influence; and, in fact, nervous disturbances of all kinds, whatever their symptomatic form, whether simple or complex, predispose as much to epilepsy as does epilepsy itself.

Among the predisposing causes we must also range (2) *Drunkenness.* This is well known to be a frequent cause of insanity; and the mutual connection of all nervous affections, especially of epilepsy and insanity, leads to the expectation of its effect proving alike in both. Again, (3) *Phthisis* acts as a predisposing cause, as shown by the number of phthisical persons found among the relatives of epileptics. There seems, indeed, also a remarkable consanguinity between phthisis and other cerebral disorders having an affinity to epilepsy, such as insanity and idiocy.

In support of these views, M. Moreau cites the particulars of 124 cases of epilepsy which have occurred in his own practice. In 44 of these, individuals below the age of puberty, 83 of their relatives (ascending as high as grand parents, and embracing uncles and aunts as collaterals) furnished 100 pathological conditions. Among 51 male adults, 113 pathological conditions were discovered in 115 relatives; and among 29 epileptic women, 71 such conditions were noted in 57 relatives.

The following are his conclusions upon a review of these cases. 1. The hereditary sources of epilepsy are far more numerous than usually supposed. In these 124 cases, epilepsy itself occurred among the relatives in 30 instances, insanity exhibited itself in one-fifth, hysteria in one-ninth, and paralysis and apoplexy in about the same proportion. In 20 of the cases the influence was traced back to the grand parents. 2. In the great majority of cases the epilepsy is not the product of any single pathological condition, but of several united, whether occurring in the same relative, or distributed among several. 3. When we observe the relatively large proportion attained by certain conditions, which have not hitherto been supposed to be related to hereditariness—as eccentricity, cerebral disturbances

of all kinds, drunkenness and phthisis; and when we observe that these conditions intermingle, alternate with, and replace each other among the ascendants, we feel justified in attributing to them the large part we have. While in these 124 cases epilepsy manifested itself 30 times, drunkenness did so 24, insanity 26, and phthisis 35 times. 4. Cerebral accidents, paralysis, apoplexy, congestion, &c., were found in 52 instances; paralysis alone occurred in one-twentieth of the cases, and the frequency with which this condition is met with among the epileptic themselves is an additional reason for attributing to it hereditary influence. Forty examples of it were observed among 240 cases of epilepsy at Salpetriere. 5. These considerations exhibit the powerful special predisposition the majority of epileptics are born with; and it may be predicted that a family having the apparatus of innervation thus injured, must, sooner or later, furnish descendants suffering from epilepsy; and probably there is no other disease that furnishes such strong proofs of its hereditariness. In such persons there is a special condition, an excess of excitability of the nervous system, which perhaps only awaits some insignificant occasion to become transformed into a morbid individuality. 6. We see in this remarkable hereditary predisposition a true neurotic diathesis, which explains the essential character of true epilepsy, and its resistance to curative agents. Epileptiform convulsions may manifest themselves, whether predisposition exists or not; but when the apparatus of innervation is in a normal state, the cause and effects will appear and disappear together. When it is deeply vitiated by hereditary predisposition, it is in vain we remove the occasional cause, for the disease existed in a latent state prior to its advent, and will persist after its cessation.

(4) *Sex.*—It would seem *a priori* that sex should exercise a predisposing influence, and that more women would suffer from the disease than men. Several authors, indeed, have stated this to be the fact; but the records at Bicetre and Salpetriere, for a considerable period, show that it prevails much more largely among men. In respect to the influence (5) of *Age*, M. Moreau's experience is in accord with that of other observers. In a total of 995 cases, the disease commenced at birth in 87; before ten years in 306; between ten and twenty, in 364; between twenty and forty, in 170; and between forty and sixty, in 68 cases; the greatest number becoming developed first between ten and twenty years, next between two and ten, and then between twenty and thirty. (6) *Temperament*—The

author's experience goes to show, at least as far as women are concerned, that lymphatic and scrofulous temperaments are more predisposed, the sanguineous coming next.

2. *Pathological Predisposing Causes.*—By those who include sympathetic epilepsy in their consideration, there is no malady or lesion that may not give rise to the disease; but even under the strict limitation imposed by the author, certain diseases may be regarded as predisposing. Among 364 epileptics, convulsions occurred in 79, for a longer or shorter time, prior to epilepsy manifesting itself. Of 671 epileptic women at Salpetriere, 61 suffered from some form of hysteria. In most epileptics who suffer from paralysis, this is a co-existent or consecutive affection; but it occurs too often prior to the epilepsy to allow of our denying all causality. Eruptive disease of the scalp and small-pox seem in several cases to have excited some predisposing power. M. Moreau believes an etiological value they do not deserve, has been attributed to the pathological changes in the nervous centres, so often observed in epilepsy. Imperfect development or vicious conformation of the cranium is often observed in congenital epilepsy, which is frequently combined with idiocy or imbecility; but on examination of the heads of 500 epileptics in whom the disease became developed at a later period, M. Moreau could detect nothing remarkable. The condition of the system which results from venereal excess or onanism highly favors the operation of slight occasional causes. Like other observers, M. Moreau has met with many cases in which the epilepsy became first developed during sexual intercourse. The chlorotic condition is often observed in female epileptics, and may furnish useful indications of treatment. The nervous condition plays as important a part as regards the individual, as it does in relation to hereditary influence. A remarkable peculiarity of this condition is the tendency the various accidents constituting it exhibit of replacing each other, and undergoing the most varied metamorphoses and unexpected transformation—fully justifying M. Cerise's appellation, *proteiform neuropathy*. Moreover, these proteiform phenomena have not only this disposition to succeed each other, but, what is of far greater consequence, they exhibit a marked tendency to transformation into more serious forms of disease, possessed of more definite, fixed, and complete characters, so as to pass into some of the great neuroses—as hysteria, insanity or epilepsy.

3. *Predisposing Causes independent of the Individual.*—The author,

although convinced that the belief so generally entertained by epileptics, that changes in the moon influence their condition, is a popular prejudice, resolved nevertheless to give the question an attentive examination. He furnishes a detailed table exhibiting the entire number of attacks 108 epileptics suffered during five years. The total of these amounted to 42,637, of which 16,324 only occurred at the lunar phases, and 26,313 in the intermediate periods. The same tables enable the author to give a similar negative response to the question, whether extremes of temperature exert any influence. The number of attacks which occurred in the different months of the year were remarkably similar. The affection has been sometimes said to be endemic, as in mountainous countries; but it is then frequently associated with idiocy, and may depend on local causes. The operation of endemicity, too, has been confounded with that of hereditary influence.

4. *Occasional Causes.*—So great is the importance of hereditary predisposition, that, in M. Moreau's view, it absorbs all the interest of the case, the occasional or exciting causes being, in its presence, of little importance. With the progress of science, the immense number of those admitted by the oldest writers have undergone great diminution. On an examination of his own and other observers' statistics, he finds that moral causes seem to have operated in 444 instances as compared with 85 physical; 364 of these being referable to the influence of fear in some of its varieties. One fact all authors are unanimous in admitting, viz :—the great tendency nervous attacks have to be reproduced under the influence of the same occasional causes that first called them forth. M. Moreau believes that the production of congenital epilepsy is not so frequently due to terror on the part of the mother as is generally supposed. He also doubts whether imitation can give rise to true epilepsy, although there can be no doubt of the ease with which the sight of an epileptic paroxysm induces the like in one liable to the disease. As to the influence of physical causes, such as blows or wounds of the head, &c., it is difficult to distinguish this from that of the accompanying mental disturbance. Drunkenness is an exciting, as well as a predisposing cause; and epileptics are, in general, much disposed to the abuse of alcoholic fluids. In respect to epilepsy excited by intestinal worms, the more exact observation of modern times only admits epileptiform convulsions being thus producible, although in a child strongly predisposed, hereditarily, true epilepsy

may ensue. It is certain that epileptics are not liable to worms more than other persons.

5. *Indications.*—Although M. Moreau again dwells upon the importance of duly appreciating the potency of hereditary predisposition in our treatment of this disease, we cannot discover that he puts forward any novel suggestions derived from this consideration, as guides in preventitive or curative treatment.

Adverting to the *empirical treatment* of the disease, he observes, that every agent capable of exerting a modifying influence on the nervous system has been again and again tried, further experience failing to confirm the existence of virtues at first announced. The only substance the claims of which he examines, is the *oxide of zinc*, which has recently been so prominently brought forward by M. Herpin. By a believer in the almost incurability of true epilepsy like our author, the statements of Herpin (that he cured 26 out of 48 patients, and ameliorated other 10, only 12 resisting all treatment) would naturally be received with utter incredulity. He nevertheless entered upon a series of trials with this agent, the result of which in no wise coroborated these statements; and he attributes their having been made to inexactitude and hasty observation—the diagnosis in some of the cases being founded on hearsay evidence, while in others, the patients had not been long enough watched after their reputed cure.

With respect to the claim set up for epileptic remedies, that they produce some relief and diminution in the violence of the symptoms, M. Moreau observes:

"Whatever may be thought by many estimable practitioners, we must confess that we altogether reject this statement, for the following reasons:—Every one knows that there are few remedies (or I might say there is no remedy) which, when first employed in the treatment of epilepsy, does not give rise to some apparent advantage. Is this attributable to the action of the substance itself, or merely to the imagination of the patient? We are of opinion that it depends a little on both; for we have seen these substances act in much the same way upon individuals susceptible to the influences of imagination, and those that were not so. It would seem that, in this great purturbation of the neurosity, every agent capable of modifying in any manner the disordered condition of the nervous system, may produce temporary relief. However this may be, it is a fact for me beyond all dispute, that the improvement thus obtained, the few

days of respite gained, are almost always, a little sooner or later, dearly paid for by the prevalence of a worse condition than before. The more sensible the amelioration seems, the more reason have we to fear the violence of the disease when it reappears," (tom. xviii. p. 156.)

Thus far no anti-epileptic has been discovered; but M. Moreau thinks, somewhat inconsistently with the above statement, that, in so exceptional a state, we should try and re-try every substance that may possibly exert a modifying influence on the nervous system. The so-called rational treatment, founded upon the endeavor to operate indirectly upon the nervous system, by remedying faulty general or partial derangements of the entire organism, has met with little more success, if any. Attempts have been made to cut short the disease by attacking a particular symptom, sometimes present—the *aura epileptica*. Various applications have been directed to near the spot where this manifests itself; but the benefit reported by Portal and other old writers to have accrued from these, probably arose from mere epileptiform diseases having been dealt with. It is possible, indeed, that temporary benefit might result, even in true epilepsy, from the effect produced upon the imagination.

Notwithstanding the highly unfavorable prognosis M. Moreau delivers in regard to true epilepsy, he yet admits that a cure does occasionally take place—this result, however, seeming rather due to the operations of nature than to any form of medication employed. Hippocrates pointed out the importance of regimen; and all subsequent authors have echoed or amplified his recommendations. M. Moreau also declares, that if any practical indications are deducible from his study of the causes of epilepsy, these are embodied in the precepts of Hippocrates. In a constitution so deeply tainted by hereditary influence, all has to be remodelled and changed. The indication is to amend, by every means art places at our disposal, the morbid disposition amidst which epileptics are placed; and for the production of modifications and transformations like these we can alone look to *hygiene*. Without dwelling upon the well-known laws of this branch of preventitive medicine, M. Moreau adverts to one or two points of importance:

1. An almost indispensable condition is a change of climate. No importance, in this respect, can be attached to any particular climate. The essential thing is to change the one to which the patient has been hitherto accustomed. By this very change, the whole physical

and moral habitudes undergo, though slow, yet certain modification, provided the sojourn be sufficiently prolonged. 2. Remove from the patient all that may over-excite his intellectual functions, and develope his sensibility, passions, and affections, while you at the same time engage him in manual labor, or other exercises favorable to the development of muscular energy. Exercise in the open air, and the employments of a country life, where alone the requisite calmness and tranquility can be found, seem to fulfil these conditions in the best possible manner. Gymnastics, too, have been found at Bicetre and Salpetriere to exert a most beneficial effect upon the health of the insane and epileptic. They should, however, only be employed under medical superintendence. 3. Food. Without doubting the importance of duly attending to the diet in epilepsy, M. Moreau does not advocate the adoption of too minute regulations. Sobriety and temperance are essential; and all drinks capable of exciting the nervous system—as tea, coffee, and, above all, alcoholic fluids—are to be avoided. The diet should be ample and reparative, but not in excess.—*Ib.*—*British and For. Med. Chi. Review.*

ART. II.—*The wounded at Sevastopol.* BY D. J. DUNIGAN, Esq., *Surgeon, etc.*

It may not be irrelevant to the subject, to give a short summary of the military position. The French occupy both flanks; the English are in the centre, their works being divided into the Right and Left Attacks (Chapman's and Gordon's batteries). The Right Attack fought the Mamelon, left flanks of Malakoff, and Redan, and also some smaller works continuous with them. The left Attack opposed the right flank of the works around the Malakoff Tower, right flank of Redan, the Barrack, Garden, 4 Gun, and Flagstaff batteries.

The proximity of our batteries to those of the enemy, ranged between 1800 and 660 yards; one, since raised in the Quarries, is distant only about 300 yards; the Rifle Pits, in advance, were, in some places, within 40 yards of each other.

During the bombardments, the Royal Naval Brigade sent 600 men into the trenches; those remained on duty between twenty-four and twenty-six hours; they marched into and out of battery under cover of the night, to prevent the enemy firing upon them; the men took injured. There was an extensive laceration in the three first cases,

out their provisions cooked, and were accompanied by two Medical Officers—one for the Right, the other for the Left Attack.

The first parallel was occupied by the Royal Naval Brigade, Royal Artillery, Engineers, and Medical Officers, with their orderlies.

In the ravines, leading from the Camp to the batteries, ambulances were stationed for the transmission of the wounded to the Field Hospitals. The Medical Officers' duty in the trenches consisted, for the most part, in affording temporary relief to the wounded, namely, arresting hæmorrhage by ligature and tourniquet; splinting broken limbs, bandaging and forwarding the patients by fatiguing parties on stretchers, to the different stations of the Ambulance Corps.

Most of the wounds were interesting in a surgical point of view, but it would be both useless and tiresome to attempt even a list of them; yet some appeared to be so very singular in their nature, that I will mention those only, to the exclusion of all others.

I. *Shell Wounds.*

A seaman, knocked down by a fragment of mortar shell, was picked up dead. The head was apparently swept from his shoulders, but there was no trace of hæmorrhage. On disentangling his clothes, which were tightly jammed around the injured part, the head was found driven downward into the chest, carrying with it a great portion of the blue shirt and red comforter. A small tuft of hair alone was visible, at the bottom of a deep cavity. It was a regular intussusception.

An officer of Engineers had just entered the battery, when a 13 inch mortar shell fell close by him, exploding as it struck the ground. One thigh was blown into the air; the other, with its bones, shattered throughout, but retaining its continuity by means of the integuments, was thrown around the back of his neck, and hung pliantly over the opposite shoulder, just as the arm of a child might lie in contact with its mother's neck. He lived for a few minutes.

A shell from the Malakoff burst through the embrasure of the right Lancaster gun, disabling four men. One received a compound comminuted fracture of the left thigh, and a similar injury of the arm; the second, a comminuted fracture of the left thigh; the third, a comminutation of the right knee-joint and ankle, both of which joints were widely open. About a pound weight of the iron shell was immovably impacted in the inner condyle of the femur. The fourth was an artilleryman at the next gun, whose tarsus was

and the shock was extreme. The Medical Officers attended to these cases where the men fell in rear of the embrasure, at which the enemy still continued to pour their shot and shell, but, fortunately for the Medical Officers, with less precision than before.

A shell was fired at a group, principally composed of Sappers and Miners. One was killed, his face having been shot away. Another was carried up to the first parallel badly wounded. On examination, it was found that half the inferior maxila of the dead man was driven into the roof of the second man's mouth.

A night or two after the capture of the Quarries, a man was killed in them by a shot from the Redan. An officer of the 97th, who was standing close by, received several severe superficial wounds from splinters. A foreign body was imbedded in the middle third of the left thigh, which was easily withdrawn by the finger. It was a large portion of one of the cylindrical bones of the man who had been killed; it was sharp as a chisel.

Two artillerymen stationed in the 8-gun battery, in the advance, on the right Attack, were sitting or lying down, engaged in conversation, when a shell exploded as it approached their position. The head of one was taken off, as if by an axe, above the neck-cloth, the tie of which was undisturbed. The forearm of the other man must have lain in juxtaposition with his thigh, for both limbs were lopped off by the same blow, in a line corresponding with Poupart's ligament. This man lived for about half an hour, urgently requesting all around him to keep sprinkling his face with water. The wounds in both limbs were jagged. The muscles of the thigh were drawn out in long bands: there was no hæmorrhage.

Another Artilleryman, somewhere about the same part of the works, had his left knee-joint laid open and comminuted by a fragment of a shell: no shock; a slight heamorrhagic oozing. As he approached the Medical Officers on a stretcher, he facetiously asked, if it was not "a wooden leg for him?" and as he was being carried to camp, he asked us "to make the leg for him."

A 13-inch mortar shell dropped so close to a seaman that it burned his perinaeum, testicles, and clothes as it burst. One of the ankle-joints was laid open; but the wonder is how he escaped being blown to fragments.

About the central point of Gordon's battery, a shell burst among a gun's crew. One poor fellow was struck over the angle of the ribs. He uttered a cry for the Doctor, and rushed about twenty

yards, when he staggered, fell, and instantly expired. His heart and great vessels were ruptured. A second man's face, right shoulder, and arm, with the trapezius and latissimus dorsi, were torn away from the body. A third received a compound fracture of ankle-joint, and a similar one of the ulna. The fourth escaped with a severe laceration of the calf of the leg.

An artilleryman setting near one of the magazines, had part of his thorax and shoulder cut away, in a line from the sterno-clavicular articulation to the hypochondrium, by the half of a 13-inch shell falling upon him.

As the Military Relief entered the right Attack early one evening, the enemy opened a fire of shell upon them from the Garden batteries. One burst over the head of the column, by which two men were killed, and about a dozen seriously wounded, the legs and arms of some being carried away. One man, whose forearm was destroyed, had all the comminuted bones driven into the thigh.

II. *Wounds from round shot.*

These wounds are easily recognized at the first glance, as there is but little variety in the appearance they present. Most of the men killed had their heads knocked away, either completely or in part. However, some cases occurred where those large projectiles went through the body, and even through the upper part of the thigh, making orifices of entrances and exit.

A bombardier, at one of the mortar batteries, while in the act of laying the mortar, was struck over the ribs by a spent shot, which had barely sufficient force to riochet over the parapet, and drop into the covered way. As soon as the man was struck he uttered a loud scream, and, as he fell, made a convulsive death-grasp, and seized the cap of the officer who was standing beside him. Death was instantaneous, although there was no mark nor breach of surface to show the size of the injury. Nothing could persuade his companions against the idea of his having been killed by a "wind contusion."

During the past winter, a shot riochetted with great force over one of the parapets, carrying away the cap from a seaman's head. The man was a little stunned, but no further mischief ensued. When his cap was picked up it contained a handful of hair, which had been shaved from his head by the shot. This would have been "a poser" for the old wind contusionists!

II. *Bullet wounds.*

Our advanced trenches being, in many places, within forty yards

of the enemy's rifle-pits, wounds of great severity were inflicted on both sides, as the force of the bullets was undiminished by distance. The orifices of exit, caused by the conical balls, more resemble shell wounds, in some instances, than a bullet aperture. In wounds about the head, especially, I have seen nearly the whole of the parietal bone carried away.

Notwithstanding those jagged wounds from Minnie balls, I have seen a soldier of the 41st hit by one on the nose, which caused as clean a wound as if done by a sharp knife. The nose was divided at the junction of the cartilages with the bones. The lower portion dropping down, but adhering by a good pedicle. It was brought together as in hare-lip.

Most of the wounds caused by the new conical bullets, are however, remarkable for the manner in which they plough up the soft parts.

A soldier of the 23d was struck by a ball which made six openings. It passed through the right thigh, through the scrotum, and through the left thigh, where it escaped.

The Russians use several kinds of bullets—one a solid conical ball, which belongs to the Liege rifle; another of a larger size and conical form, hollow at the base, with a small piller, or nipple, standing in the cavity. It is surrounded by three lines. At the base, to guide the ball in its flight there are two other smaller ones, modifications of this principle. The old round ball is also still employed. In some cases two of these round bullets have been found connected by a transverse wire, like bar-shot.

IV. *Grape-shot wounds* have been severe and numerous. The following was an interesting case:—

A soldier of the 49th was struck on the temple by a grape-shot, which destroyed the squamous portion of the temporal bone. The brain was flowing through the wound, the man breathing stertorously. The grape-shot was supposed to be within the skull. It was subsequently found in his mouth, at the base of the tongue, pressing against the epiglottis.

Since the commencement of siege operations before Sevastopol, one Medical Officer has been killed, and two or three have been wounded. The first, Mr. O'Leary, Assistant Surgeon of the 68th Regiment of Light Infantry, was actually cut in two by a cannon ball while in the act of assisting a wounded seaman. It is only to be wondered at, that more casualties have not occurred among the

Medical Officers; for during the heat of the fire, they are constantly called from place to place, running along the batteries through the line of fire, in quest of the wounded. During the second bombardment this peripatetic system was very trying and fatiguing, for the soil was heavy and tenacious from the torrents of rain that then deluged the trenches; and instances occurred where officers' boots drew off while running along to assist the wounded.

The French arrangements are excellent. They have established a surgery, with all the necessary appliances, in one of the ravines, where a staff of Medical Officers are stationed for their daily duty. The Medical Officers in the trenches apply tourniquets, or do whatever is most earnestly called for, on the spot, and then send the wounded on to the Hospital Staff, by whom they are next examined. If the cases demand immediate amputation, the operations are performed; if not so urgent, the cases are sent on to the Field Hospitals.

The duties of the siege fall heavily on the Medical Officers of the Naval Brigade, five of whom do that duty, and out of the five two go daily on trench duty. It comes to the turn of an Army Medical Officer to go less seldom into the trenches. The time of duty varies in the different divisions, according to the strength of the Medical Officers in them. In some the Medical officer goes once in a fortnight, while in others the time extends even to once in five or six weeks. The Royal Artillery send no Medical Officer now, unless a general bombardment be going on. On the whole, this trench duty is very trying and hazardous; and, in performing it, the Medical men run the same dangers, if not more, certainly not less, than the executive Officers, who are generally stationary in a battery, while the Medical officers, as ubiquitous as possible, are rushing in all directions to succor the wounded.—*Med. Times and Gazetee.—Virginia Med. Journal.*

Art. III.—*Interesting Statistics.*

Mortality of Three Successive Years in the Four Cities.

	1853.	1854.	1855.
Philadelphia	9,750	11,811	10,509
New York	21,864	28,458	23,107
Baltimore	5,117	5,938	5,447
Boston	4,369	4,418	4,030

Various Prominent Diseases.

	Philadelphia.	New York.	Baltimore.	Boston.
Consumption	1,322	2,603	846	718
Convulsions	628	2,062	128	127
Cholera	10	19	—	—
Cholera infantum	565	1,141	323	231
Cholera morbus	28	43	19	15
Diarrhea	178	800	30	21
Dysentery	266	575	199	139
Scarlet fever	155	992	131	65
Typhus fever	224	159	95	81
Inflammation of lungs	260	1,168	117	189
Small Pox	273	106	52	182
Marasmus	441	1,502	1	75
Still-born	618	1,581	403	*
Other diseases	5,541	10,356	3,103	2,187
Total	10,509	23,107	5,447	4,030
Under five years	5,296	14,231	2,820	1,972

The proportion of deaths to the inhabitants of each city is shown in the following tables:

Ratio of Deaths to Population of 1850.

	Deaths in 1855.	Population of 1850.	Ratio of deaths to inhabitants.
Philadelphia	10,509	409,000	1 to 38.73
New York	23,107	515,000	1 to 22.29
Baltimore	5,447	170,000	1 to 31.21
Boston	4,030	137,000	1 to 34.00

Ratio of Deaths to present estimated Population.

	Deaths in 1855.	Estimated population.	Ratio of deaths to inhabitants.
Philadelphia	10,509	530,000	1 to 50.43
New York	23,107	630,000	1 to 27.26
Baltimore	5,447	220,000	1 to 40.39
Boston	4,030	160,000	1 to 39.70

Mortality of Seven Successive Years in Philadelphia.

	1849.	1850.	1851.	1852.	1853.	1854.	1855.
January	542	469	568	1041	758	750	689
February	541	570	599	838	774	848	972
March	701	719	774	889	730	771	892
April	622	597	609	808	867	985	774
May	522	621	634	860	697	697	909
June	914	829	814	775	886	1020	698
July	1782	1045	1057	1098	918	1786	1113
August	1239	1225	1020	918	1027	1471	1228

*In Boston the still-born are not reported.

Mortality of Seven Successive Years in Philadelphia—Continued.

	1849.	1850.	1851.	1852.	1853.	1854.	1855.
September	994	647	675	770	803	1266	1046
October	565	565	565	735	878	758	868
November	466	636	770	681	687	816	603
December	659	550	757	832	725	643	717
	*9547	8473	8841	10245	9750	*11811	10509

Weather Statistics for 1855.

The following interesting statistics of the weather for the past year are gleaned from the record kept at the Pennsylvania Hospital by Dr. John Conrad.

The mean temperature of December was 36.73 degrees, which is 2 degrees above the average of the last thirty years—and the amount of rain 5.42 inches. At Trenton there was 5.35 inches of rain, and at Paoli 6.43 inches.

The following table shows the highest, lowest, and mean temperature of each month in 1855:

	Maximum degs.	Minimum degs.	Mean degs.		Maximum degs.	Minimum degs.	Mean degs.
January,	65	17	35.14	July,	95	60	78.50
February,	49	2 b.Z.	27.65	August,	87	56	73
March,	67	17	39	September,	91	47	67.61
April,	86	24	52.26	October,	75	33	53.89
May,	85	40	61.47	November,	69	27	48
June,	95	53	70.19	December,	61	14	36.73

The mean temperature of the year is 53.64 degrees. The mean temperature of the preceding 30 years, 53.31 degrees. The warmest day of the year was the 19th of July, the mean temperature of which was 86½ degrees; and the coldest was the 7th of February, the mean of which was 8 degrees. The range of the thermometer was from 2 degrees below zero to 95 above. The temperature of the seasons, as deduced from observations for 31 years, is as follows:

	Degs.		Degs.
Winter months	33.16	Summer months.....	73.44
Spring "	51.87	Autumn "	54.78

The warmest year was 1828—mean 55½ degs.
The coldest year was 1836 " 49 "

The Mean Temperature of the Months for 31 *Years.*

	Degs.		Degs.
January.....	32	July.....	75¾
February.....	32½	August	73
March	41¼	September	65¾
April.....	51¾	October.....	54½
May.....	62½	November	44
June	71½	December	34½

* Cholera years.

Amount of Rain for each Month of 1855.

January	2.34 inches.	August.....	2.79 inches.
February	2.35 "	September	4.00 "
March	1.68 "	October	4.11 "
April	2.05 "	November	2.04 "
May	2.96 "	December	5.42 "
June.....	7.95 "		
July	6.40 "	Total	44.09 "

Amount of Rain for each Year, from 1838 *to* 1855.

1838.....	45.29 inches.	1847.....	45.09 inches.
1839.....	43.73 "	1848.....	35.00 "
1840.....	47.40 "	1849.....	42.09 "
1841.....	55.50 "	1850.....	54.54 "
1842.....	48.53 "	1851..	35.50 "
1843.....	46.91 "	1852	45.74 "
1844.....	40.17 "	1853.....	40.66 "
1845.....	40.00 "	1854.....	40.18 "
1846.....	44.38 "	1855.....	44.09 "

The average amount for these eighteen years is 44.16 inches. The greatest amount which fell in any year was in 1841, (55½ inches,) and the least in 1848, (35 inches.)

Average Amount of Rain for each Month of the Year, for 18 *Years, from* 1838 *to* 1855, *inclusive.*

January	3.01 inches.	July	4.37 inches.
February	3.03 "	August.....	4.60 "
March	3.50 "	September	3.50 "
April	3.64 "	October	3.29 "
May	3.97 "	November	3.43 "
June.....	3.66 "	December	4.09 "

—*Philadelphia Medical and Surgical Journal.*

Art. IV.—*Old Fogyism!—Cogitations and Vaticinations.* By an Old Fogy.

In the latter days of Young Americanism, Young Irelandism, and Young Physic, all who revere the past in art, science and religion,—who cannot accept in their full extent all the daring speculations and hasty conclusions of the self-styled men of progress,—who believe that Jesus Christ was a greater personage than Andrew Jackson Davis,—who contend that Plato, and Aristotle, and Lord Bacon were at least equal to Swedenborg and Judge Edmonds,—who look upon Hippocrates and Galen, and Sydenham, and Rush as greater philosophers than Lebert and Robin,—who regard brains as of more importance than the microscope,—who

think that there are other ways of employing time equally as profitable as in counting the number of stigmata on an insect's back, or measuring the length of a flea's hind leg,—who regard the mighty thoughts of great men as of more importance than the *microscopic* additions to science effected by modern plodders,—who possess a degree of modern scepticism that cannot swallow conviction in lump and gain remote conclusions at a jump,—who believe that men knew that blood is blood before the microscope revealed its corpuscles,—that tubercle is tubercle before its appearances under the microscope were familiar to observers,—that yellow fever as truly diagnosticated before as since the detection of sarcini in the black vomit,—all such men are now-a-days called Old Fogies. I am an Old Fogy. I believe that our ancestors, our fathers, knew something. I believe that a great deal of what is called progress is nothing but gyration, resembling the progress of the dog that follows his own tail. I doubt very much that we treat disease much better than did Bœerhaave and Sydenham. I do not deny that some advances have been made in the details of science within the last hundred years. I would not underrate them; but I do not wish to overrate them. What discovery of the last twenty years can rank with that of the power of vaccination in preventing small pox, or of the circulation of the blood? None, not even chloroform. Chemistry, so far as it bears on the nature and treatment of disease, is yet in its infancy. That it will effect a great deal, I verily believe; that, as yet, it has not done a great deal, may be safely asserted. The Old Fogy knows enough to hope for more; but he is not blind enough to believe that the consummation of science is close at hand. He believes that ages will be required to effect what the ardent *Know Nothing* thinks already effected. Old men *know* what fools young men are, whilst these latter *think* old men fools. Let us estimate briefly and honestly what the microscope has done for science. I do not deny that it has done a great deal for science in general. It has enabled men to see and classify beings too small to be observed by unaided vision. It may be said that it has revealed the elementary structure of animal and vegetable tissues. I do not deny the value of the microscope in science; but curious and interesting as this instrument may be, it cannot do everything. It would be doing it a serious injury to over-praise it. Physicians cannot restore life to the dead by microscopic examination. They cannot tell, by looking through the microscope, whether

a given substance is poisonous or edible; they cannot tell, by microscopic examinations, a very great deal about the diagnosis of disease. I do not say that nothing can be learned in this way,—I wish more could be learned,—but the fact is that the microscope is, as yet, at least of no utility in diagnosis. It is true that we can detect the different salts of the urine by their peculiar crystals, and certain vegetable fungi in some diseases of the skin; we can find vibriones and sarcini in the ejecta of certain diseases; but in the diagnosis of disease, in the proper sense of the term, the microscope is of secondary utility, to say the most of it. It has been said of late years that pathological products, as tubercle, cancer, etc., are distinguishable by the microscope, and that this instrument is the only infallible means of determining whether or not a given morbid product is cancerous. It has been contended that there is one form of cell in tubercle, another in cancer, another in epithelioma, and so on; in a word, that every growth and deposit had its proper and peculiar microscopic characteristics, by which it may be always distinguished from every other tumor or deposit. All that you had to do, in order to know the nature and name of any morbid product with which you meet, was to send it to a microscopist, and you would learn by the return mail. If you saw tubercles in the lung, you were not to believe it really tubercle until it had the imprimatur of some microscopist. If you saw a cancer or malignant tumor, you were not to believe it malignant, (though it might have killed the patient,) until the nucleated cell was found in it. If you extirpated the most benign growth, you were required to quake in your shoes, until the far-seeing and solemn micrograph announced the fact that the nucleated or nucleolated cell was absent. Wo to the patient! no odds, how mild and benign the disease, if it contained the fatal cell; his fate was sealed. The micrograph will tell you that hygeia and all the demigods and doctors cannot prevent the return and fatal termination of the disease. To be sure, and it is consoling, he will admit that the disease may delay its return ten, fifteen, fifty, and perhaps a hundred years, or something amounting to this. Oh no! The Andrals, the Velpeaus, the Broussias did not even know what to call the tumor they met with. The pathological products they encountered were ignored until they called on a Lebert or a Robin! The internes got ahead of their masters by the aid of a philosophical toy; all previous observation was null and void and useless in disease, because the diagnosis had

not been verified by the microscope; the classification and nomenclature of ages were to be thrown overboard, to give place to the crude ideas of a few Red Republicans in science. Now, what I mean to assert is this, that the microscope is of mighty little use in the diagnosis of disease generally, and of morbid products in particular. By means of the microscope we may find sarcini in *black vomit*, but we have diagnosticated the *black vomit before* we discovered the sarcini. We may find disintegrated cells in tubercle, but we know the product to be tubercle as well before as after this discovery. We may find the nucleated cell in cancer or malignant tumor, but we already knew by other signs that the tumor was malignant, and neither the presence nor the absence of the cell would change the diagnosis, prognosis or treatment of the case. But can we not learn much about the ultimate structure of morbid products by means of the microscope? Certainly. There is no other way of learning the appearance of microscopic objects than by the microscope; but what I mean to say is, that the knowledge thus acquired is of no great use in diagnosis. The chemists might ask, with some show of reason,—and the chemists had their day of self-conceit as well as the microscopists,—the chemists might ask how can you diagnosticate these morbid products, these pathological epigeneses, these *neue Bildungen*, these pseudo-plasmata, without knowing the kind and proportion of the elements constituting them? Certainly these ultimate elements can be revealed only by chemical analysis; but, as in the case of the microscope, the crucible throws no great light on the *morbid nature* of these products.

Disease is but a variation from health. It is classified and estimated and diagnosticated by its symptoms and signs, its march and its termination. It consists of every variety of shade and degree, from the slight malaise to the torturing spasm, from the scarcely appreciable change in a part to the sloughing carbuncle or cancer. It is complicated in kind, and ever-varying in degree. Its mutations of quantity and quality defy the scaffoldings and arbitrary sections and divisions of system-makers and nosological closet-dreamers. To-day it is slight, to-morrow it is grave. This week it has effused, but not yet organized plasma; next week it has cells, the week following fibres; this month its products are organized, next month they are disintegrated and form an amorphous mass. Disease is a greater or less change in the organization. It is not a new organization out of different material; it is the normal, the

physiological material changed in quality, changed in the time or place of its appearance. Diseases are not entities, as some of the microscopic gentry seem to suppose; they are but variations of one entity. Now, if diseases were entities, were things separate from the system which get into the system, and there grow and congregate,—if diseases were material objects like minerals, plants and animals,—then they might be diagnosticated by the microscope. In fact, they could be diagnosticated in no other way, if they were too small to be seen with the naked eye, or by the aid of a pair of spectacles. We distinguished a navicula attenuata from the cornea of a fly's eye in no time by the microscope; so we could diseases, if they were entities as different from each other as the objects above mentioned. I, for one, had thought and hoped that these old exploded ontological notions were safely entombed in the sepulchre of all the defunct theories. I had no idea that they would be revived and re-discovered by men who pretended to progress and to be wiser than their fathers. As, however, the microscope is now in vogue, and as its claims are based upon these old-fashioned country notions of entities, ontology must be galvanized into a sort of existence, to stagger a brief hour on the stage, and then go down to the second death to which common sense and a moderate degree of medical knowledge will doom it. Talk about a certain cell being always present in tubercle, a certain other cell being always present in cancer, a certain other cell being always present in epithelioma, a specific cell for warts and corns, and another for chancres, a certain fibre characterizing a particular tumor ab initio ad finem, and of the unalterability, the fixity of these things. My dear microscopic friend, this is all false; this is no better pathology than that of the countryman of whom Watson speaks in his "Practice of Medicine." The countryman, speaking of the ague, said he had never seen it but once, and then it was vomited up by a friend of his, and that it looked like the white of an egg or a piece of jelly. The countryman, you see, was an ontologist. Lay aside your microscope and reason a while, my ardent friend; put forth the power of your mental eyes before you put out physical ones, and you will see that all these pathological products, termed separate diseases, are made of the same material, of the same cells; that the amorphous blastema is changed into the granule, the sac, the nucleated cell; that the cell is changed into fibres, and so on; and how far the organizing process may proceed, will depend on a

variety of circumstances. All these forms of organization may occur wherever the fluid plasma is effused in tubercle and other deposits as well as in tumors, in the mild as well as in the malignant. Do not throw away your microscope, my friend; do not underrate it; but do not so overrate it as to bring it into the disrepute which awaits all overrated things.

Thus we may reason a priori; but what are the direct facts as to the utility of the microscope, in the diagnosis, say of tumors, for example? Why, the facts show that the microscope is just about of no service at all. Velpeau sent tumors of the most malignant kind to the best microscopist of Paris, and no so-called cancer cell was to be found in them. That these were cancers, (using the term *cancer* in the sense *malignant tumor*,) was clear, for from their appearance, the state of constitution in which they occurred, from their recurrence, and finally from the circumstance of their fatal effects on the system. Velpeau sent also to these micrographs benign tumors in which they did find the so-called cancer cell. This happened not in one or two cases only, but in many; so that it had been clearly established by direct observation that cancers may not have the so-called cancer cells, and that non-cancerous tumors may have them; so that the conclusion is irresistible that the cell is not diagnostic of cancer. This is irrefutably shown by the recent debates on the subject in the Academy of Medicine in Paris, reports of which have been published in the "American Journal of Medical Science."

And is it, then, the general opinion of pathologists who are adepts in the use of the microscope, that there is a specific cancer cell, a specific tubercle cell, and so forth? No! by no sort of means. The vast majority believe no such thing; the most distinguished micrographs teach the contrary doctrine. Among these may be mentioned Vichow, Vogel, Gluge, Burnett, Paget and Mandel. I know of no microscopist, worthy of the name, who contends for the specific cell, except Lebert, Broca and Robin. Mandel says that there are cellular cancers, epithelial cancers, and fibrous cancers. The notion that the various tumors and deposits are distinct species, is, as I have already said, founded on false doctrine that diseases are entities as distinct and classifiable as animals and vegetables. It is founded not on physiological or pathological knowledge, but the want of it. There can be no such thing as species in the deposits and tumors, for they are all the same in origin; the same

plasma is the fountain source of the whole of them; they shade off into each other, they run into each other; they change from day to day and from month to month. Physiology and pathology are the lamps by which the physician and surgeon are to be guided in the diagnosis and treatment of disease; and I confidently predict that, in the presence of these increasing lights, the fond theory of specific cells will vanish with the darkness in which it was engendered.—*St. Louis M. & S. Journal.*

ART. V.—*Introductory Lecture to the Medical Session of the University of Dublin.* By WILLIAM STOKES, M. D. Regius Professsor of Physics.

I have been directed by the provost and senior fellows, to open the medical session by a public address. This proceeding, which is a novel one, is not without its meaning. It implies the wish of the heads of the University to make known, through their proper officer, the steps which they have taken to promote the schools of medicine and of surgery, within their walls, and the views which they entertain as to the advancement, not only of these institutions, but of of medical education in its broadest sense.

Our profession, gentlemen, has long been in an anomolous position. While its more successful members may attain wealth, and rank, and consideration, the mass is not on an equal footing with that of the church or the bar. I will here only indicate one of the many causes of this state of things; it is that so many of us have received but the special or exclusive education. It is not so in the sister professions. And the evil has, in part, arisen from the fact, that in former times the study of medicine was not sufficiently fostered by the great universities. The teaching of medicine passed in a great measure into private hands, and licensing bodies sprang up, who were content with the merely special education. The result was natural. The student, while yet a boy, commonly uneducated even for his age, knowing nothing of the world, or of the requirements of society, is sent to work in the dissecting room, or to sit on the benches of a medical theatre, to listen to lecture after lecture on different subjects, until the time come when he is enabled to pass an examination. At the end of the fourth year, the license is obtained, and he enters the world, too often unfit to take his place in society,

or support the rank of his profession. He may be, and generally is, the son of a gentleman, but he has not received the education of a gentleman. Such a man is often soured by finding himself deficient in the knowledge which society requires. He rails at the treatment of his profession by the public, while he should feel that much of what he complains of, is but the result of the vicious system to which he was a victim. Yet such a man is better off than he who has sprung from the lower ranks, and who has never been afforded the sole means by which he could take and keep his place. For he often wants those refinements of feeling and thought which are often hereditary, and which to a certain degree would compensate for a proper mental culture. To him the want of a liberal education is a bar which it is hardly possible to get over.

I can speak on this subject with confidence, for I have now been more than twenty-five years occupied in the teaching of clinical medicine, and I know that some of our students have obtained their diplomas from various licensing bodies, without possessing the knowledge indispensable to a common clerk. I shall not soon forget an observation made to me by a gentleman, then high in office, and head of one of the departments of the public service. "We got," he said, "from Ireland, some of our very best and very worst men." I asked him in what the second class were wanting; he answered, "in conduct and common letters."

Gentlemen, you have adopted medicine as your profession. Let me ask you, have you thought upon the nature of the road you are about to travel—do you expect to move onward as on a beaten path, like machines and not like men? Do you look at your profession as a mere means of livelihood, to be reached by a course that can lead only to mediocrity, or will you strive to fit yourselves for the highest place, by a full moral and mental culture? I trust you will. We hear of our profession being overstretched: but remember that saying of Swift's, that in "every crowd there is room over their heads." By these means alone will you obtain self-respect. Avoid the lower, qualify for the higher aim. Reject as false, and utterly mischievous, whatever you may be told as to the inutility of a broad and liberal extra professional education; you are not going to a trade, but to become members of an honorable profession, and therefore, it behooves you to consider whether you will sacrifice your chances of rank and success, by following those advisers who tell you, for their own purposes, that an exclusive education will serve your purpose.

I warn you against such a doctrine. A few years will show you that it is contrary to the spirit of the age. Do not believe that with your minds unopened, unrefined by literature, untrained to accurate reasoning, with your tastes undeveloped, and your habits untutored, the mere fulfillment of your medical or surgical curriculum, will qualify you to support the honor of your profession, or place you in the class of the workers and pioneers of a progressive science. No, you will not go to a profession as an ignorant man to a handicraft; you are to be associated with men of education, therefore you must not be inferior to them in education; you are to support the dignity of a noble profession, therefore your mental powers, and your moral perceptions, must be cultivated and exalted; you are to be placed in a position of all others the most fruitful in opportunities of doing wrong to your brother in the dark, and of obtaining wealth by practicing on the credulity of mankind; therefore you must cherish the most delicate sense of honor, and so train yourselves, that your conduct shall be based, not so much on the fear of the consequences of wrong, as upon a perfect love of that which is right.

But let me not be understood as conveying any slight on the members of our profession who have been condemned to the mere education of the curriculum. This, however, I will say, that their character has been made by one branch of study. It was not made by the practice of repeated anatomical dissections, nor by listening to tripple courses of lectures. It was made in the hospital. In its wards, the student learns that which cannot be taught in the dissecting room, or in the theatre. Here—where disease in every shape, and the suffering of his fellow-man in every degree, surround him, and mutely, but imperiously, ask for help—he begins to do for himself that which he had been hindered doing before. He learns to reason, to teach himself to act and to discover. But he does much more. The kindlier feelings of his heart are stirred, and he is so trained to works of charity and mercy, that their practice becomes at last a second-nature. He may be rude, unlettered, but he not only bears with him into after life that which is the characteristic of our profession, the wide spread and lasting exercise of that virtue which the inspired apostle denotes as the great mark of the Christian character; but, he acquires that moral courage by which, at the call of duty—or of mercy, which is his duty—he learns to despise danger and meet death, whether it come by the pestilence or the sword.

Gentlemen, medicine is essentially a progressive science, and avails

itself of almost every branch of knowledge in its progress. It has been objected to medicine that it is not an exact science, and a slur is attempted to be cast on it by those in whose minds the ideas of the inexact and erroneous, or at least the uncertain, are confounded.

Medicine is an inexact science; but this is no reproach. By this very character it enters into fellowship with the most noble of human inquiries—with those which have for their object the relations of the created to the Creator—the future state of man, his moral and his intellectual nature.

Remember what it is that constitutes the bases of the exact sciences—number, force, weight, form, arrangement, chemical consitution, and so on.

The mathematician, ascending from the simplest idea, can develop new powers almost indefinitely. The astronomer measures and weighs the heavenly bodies; and the physical philosopher, dealing with light, and heat, and electrical action, can bring either pure mathematics or geometry so to bear in his researches, as to enable him not only to explain, but to predict. Thus our own Hamilton predicted conical refraction; our own McCullagh was in the path to discover it by another method; and Leverrier and Adams declared the existence of a planet which eye had never seen. The chemist has analysis and synthesis at his command, and even the anatomist and geologist have their constants to start from. They have little more to do than to observe, to reckon, and to compare. They deal with what has been, and their principles, once determined, are little likely to be disturbed.

But we have to do with something which cannot be measured or weighed; something, too, in which experiment can only be used within narrow bounds—an element whose nature is yet unknown, fleeting in its action, and every day producing new combinations, not merely new because they were never observed before, but really new as appearing for the first time.

All this will help us to understand why we have not yet a theory of medicine. But let not our zeal be therefore diminished: we are young in the world. Let us firmly believe that, at the appointed time, when the required amount of facts have been faithfully recorded, they will, by one of the great properties of truth, crystalize spontaneously into a system and a law.

In the meantime, let us never forget, that every connection that

can be established between the mathematical and physical sciences and medicine, will impart to it more or less of certainty. It was long ago proposed by Graves, that, with the view of discovering the laws of epidemics, medical observatories should be established in various parts of the world, in which reliable observations should be made, not only on the history and character of disease, but on all the co-existing conditions of temperature, of chemical and magnetic action, and the hygrometric and meteorologic states. This great idea has since been put forward by Humboldt, who, in speaking of epidemic diseases, observes that we shall probably remain in ignorance of their nature and causes, until all the laws of terrestrial magnetism and meteorology are determined. What better argument could I use in favor of a scientifiic education?

Gentlemen, I have in this lecture alluded to but a few of the causes which have tended to retard the progress of medicine; but there is, in the very nature of medical science, a power and a virtue which will cause it to triumph over all those influences which an unenlightened system has brought to bear upon it. A time will come when it will take its proper place, and what that place is to be, we can anticipate without difficulty and without presumption. The physical and moral natures of man are mysteriously and inseparably united; and if to save the erring soul, and to elevate the moral condition of man, was thought worthy of a special revelation, can we doubt that the science which has for its object the well-being of man in his physical state, so intimately mixed up with his mental and spiritual life, will not yet occupy a foremost place? Let us not, then, be disheartened; remember that the human family is still young upon the earth, so young that not a monumental inscription of one of us has yet been written on any of the mighty tombstones with which nature has overspread the earth. Let us have an unshaken belief in the ultimate harmonizing of the truths of religion and science, a harmony which, at this moment, doubtless exists, if we could but see it; and let us further believe, that when those influences which enslave the minds and the bodies of men have faded away before God's light, we shall see our science taking a foremost rank, only inferior to that which deals with man's future existence, and man's future hopes.—*Med. Times and Gazette.*

ART. VI.—*A few lines for those who contemplate visiting Paris, for improvement in medical knowledge.* By ROBERT P. HARRIS, M. D.

PARIS, Dec. 25th, 1855.

The first requisite for the student or physician visiting Paris to attend its medical school and hospitals, is a knowledge of the French language, particularly that portion of it which is known generally by the term "Medical French." The language should be studied with particular reference to a knowledge of the terms used in medicine and surgery, and of the comparative weights and measures of the French pharmacy. A very imperfect knowledge of the language of every day life will be found quite sufficient for obtaining those comforts that may be required by the stranger upon his first arrival. The main thing is, to be prepared to understand the bed-side talk in the hospitals and the clinical lectures in the ampitheatres. There are but few who come to Paris, excepting those who have been accustomed to read medical books in French, that understand the lectures at first, however perfect their knowledge of the language may be in other respects. The reading of a good medical treatise in French, upon the subject of a lecture, is the cause of much increase in the facility with which the listener understands the language used. For a knowledge of all the terms used, arranged in the vocabulary form, I refer the reader to Nysten's Medical Dictionary, edition of 1855, (Dictionnaire de Medicine par P. H. Nysten.) There are few who come here from America to attend the hospitals, who have not resolved to devote their attention more particularly to one or very few of the subjects embraced in the science of medicine. My advise to these is, to read in French some treatises upon their favorite branches, for the purpose of studying the language merely.

The best work that has been written, from which you may gain a knowledge of the Parisian school and hospitals, is that of Dr. F. Campbell Stewart, of Staten Island. The book is somewhat out of date, as it was published twelve years ago, but there is still sufficient to make it of much value to the medical visitor. In it will be found biographical sketches of many of the eminent French physicians and surgeons, some of whom, such as Velpeau, Civiale, Dubois, &c., are still living. To the visitor of the hospitals I recommend the "Guide aux Etudiants en Medicine," a little work by the Secretary of the Faculty of the school of Paris, and one which I have found very little known by the strangers now here. Much time is lost generally by visitors, in their endeavors to find out which hos-

pitals and which cliniques will be the best for them to attend, as the means of information are here very imperfect in this respect, being large hand-bills posted upon the walls of the hospitals, school of medicine and court of the theatre of anatomy.

The portion of Paris in which students generally live, is known as the "Quartier Latin." It is convenient to the Medical School, Dissecting-room, Ecole Pratique, and Hotel Dieu. These are its advantages, as well as its cheapness. In other respects, many other parts of the city are preferable as a residence. By selecting the Rue de l'Odeon, Rue Buonaparte, or some of the widest and cleanest streets of the Quartier, one may live quite comfortably and find his wants well attended to.

The hospitals most visited by students, are Hotel Dieu, Hopital de la Pitie, Hopital de la Charite and the Hopital des Cliniques de la Faculte de Medicine. The Hopital St. Louis is not much visited during the winter months, but is much frequented in the spring.

In former times, the usual hour for visiting the hospitals, to attend the bed-side cliniques, was 7 in the morning. At present it is at 8, in the most of them, though the time varies with different Physicians, from 7½ o'clock to 9. Eight o'clock is found by the student to be quite early enough at this season, particularly if he is visiting, as I often do, a hospital at nearly three miles distance. As a general rule, but one hospital and one clinique in that hospital can be attended each day. I once attended the bedside instruction of three physician and one surgeon in one hospital, on the same morning, and twice I have visted two hospitals on the same day; but this can rarely be done, and is more of a feat than an advantage. All students should pay a visit, if it is only for once, to Hopital Lariboisiere, a new institution and only completed last year. It is by far the most magnificent establishment of the kind I have ever seen, and I very much doubt if its equal is to be found in any other city.

The physicians and surgeons of Paris, best known in America, are Velpeau, Civiale, Jobert, Ricord, Malgaigne, Dubois, Cruveilheir, Rayer, Cazenave and Andral. The Surgeon whose clinical lectures are the most crowded at the present time, is Nelaton, at the Hopital des Cliniques. Next to him is Velpeau, at La Charite. Jobert, at Hotel Dieu, and Michon, at La Pitie, have also large classes in attendance. Guersant, the Surgeon of the Hopital des Enfants'

Malades, gives very instructive lectures upon the surgical treatment of maladies in children; he has also quite a large class at his Thursday visit and lecture. Of the physicians, there are a number who are nearly equal, in respect to the size of their audience. Trousseau, at Hotel Dieu, Dubois, (obstetrics,) at Hopital des Cliniques, and the physicians of La Pitie and La Charite, have all large classes. I have given here the names of those whose cliniquies are most frequented by students, and, as a general rule, they are the best lecturers for the student to hear; but there are some hospitals which are very little visited, on account of distance, that have very eminent physicians and surgeons, and whose instructions are perhaps, more valuable, as there is a much better opportunity of studying the cases, on account of their being no crowd of visitors. I particularly recommend, as a surgeon, M. Denouvilliers, the lecturer upon anatomy, one of the surgeons of St. Louis. His service is a very large one, both male and female, and the cases are many of them of great interest. He is a good operator, and his treatment of his patients has none of that roughness, almost amounting sometimes to brutality, observed in some of the French surgeons. On Wednesday, he examines and treats cases of uterine disease, the patients under his care being mostly from the outside, who go there on that day to be prescribed for.

For those who desire to study the specialities of medicine and surgery, I will state a few facts in point. The principal eye cliniques, are those of Sichel and Desmarres, the latter the most preferable. For uterine diseases, Dr. Gibert, "St. Louis," Mondays; Jobert, "Hotel Dieu," Mondays and Fridays; Denouvilliers, "St. Louis," Wednesdays; Chassaignac, Lariboisiere, Tuesdays and Saturdays. For stone in the bladder and diseases of the urinary organs, Civiale, "Hopital Necker," on Saturdays. For obstetrics, Dubois, "Hopital Cliniques de la Faculte de Medicine." For syphilis in its primary form, Ricord, Hopital du Mida; in its secondary forms, Gibert, at "Hopital St. Louis." For diseases of the skin, Gibert, St. Louis, in winter, or in the spring the clinical lectures given by the different physicians of St. Louis.

For the general student, the following embraces a good order for visiting the chief hospitals, and attending to the most important subjects:—

Mondays. Dr. Gibert—Hopital St. Louis—Skin diseases and examination with speculum, 8 o'clock.

Tuesdays. Dr. P. Dubois—Hopital des Cliniques—Obstetrics, at 9 o'clock.

Wednesdays. Dr. Denouvilliers—Hopital St. Louis—Surgery and Uterine Diseases, at 8½ o'clock.

Thursdays. Dr. Guersant—Hopital des Enfants' Malades—Surgery applied to the diseases of children, visit at 8 and lecture at 9 o'clock.

Fridays. Dr. Trousseau—Hotel Dieu—Practical Medicine, at 7¾ o'clock.

Saturdays. Dr. Civiale—Hopital Necker—Diseases of the Urinary Passages and Stone in the bladder, at 9 o'clock. As this hospital is next door to the Children's Hospital, the medical clinique, from 8 to 9, may also be attended at that institution, if the student wishes it.

The usual daily routine of life in Paris with the student, who is really one in deed as well as in name, is to rise before daylight and visit a hospital; then get his breakfast; next take his lesson in French; then perhaps dissect, or attend a lecture at the School of Medicine, and fill up the remainder of the time not allotted to sleep, with reading of French medical books. There are many idlers here, I am sorry to say, who manage to attend one of the cliniques which allow of a little longer sleep in the mornings than those I have referred to, and who thus get a little hospital experience to boast of when they go home, but who waste much of their time in frolicking and sight-seeing, instead of study. These, as a general rule, are either men who are not obliged to depend upon their profession for a living, or those who have very recently obtained their diploma and have as yet had no practical experience in the medical profession. Paris is a bad place to send such men to learn wisdom. They would profit much more by a visit made later in life.

Much might be said about the comparative merits of our own and of the French hospitals, but I leave this to the good sense of the medical stranger, who will no doubt form a correct opinion with regard to the matter. We have, in America, many improvements, particularly in the treatment of fractures and the dressing of wounds, of which the French seem to be entirely ignorant. Their want of knowledge of our language is one great cause of this, together with a rather contemptuous opinion which they hold in regard to our mer-

its as surgeons and physicians. The chief great merit of the French, is their accuracy of diagnosis and the great attention paid to imparting a knowledge of it to others.

Some idea of the extent of the hospitals of Paris may be formed, when I state, that from 80,000 to 100,000 patients are treated in them yearly; that between 4,000 and 5,000 dead subjects are sent from them to the two dissecting ampitheatres; and that $2,500,000 are annually expended in their support.

Whilst I am upon this subject of hospitals, I will also state a few facts upon the study of medicine in Europe in general. The best Obstetric clinique, is that of the great General Hospital of Vienna. In this hospital, there are about 8,000 births in the obstetric department per annum, or about 20 births a day on an average throughout the year. The student takes, with 23 others, a course of practical instruction, lasting eight weeks, during which time he is in constant attendance, and receives the cases in his turn. He has also the advantage of examining by the touch all the cases that present themselves, whether under his own immediate care, or that of others. The second Obstetric school of Europe; is the Dublin Lying-in Hospital, where there are 2,000 births per annum. The best ear clinique, is that of Mr. Wilde, of Dublin. At St. Mark's Hospital, there is also a Dispensary for out patients, both eye and ear, under the care of the same surgeon. Mr. Wilde, is no doubt, the best aurist in the world, and he is, perhaps, second to no one in his knowledge of the diseases of the eye. I have attended his clinique, and can speak from experience, with regard to the value of the instruction given. For the diseases of the eye and ear, I would recommend him above any one with whose reputation I am acquainted in Europe.

ART. VII.—*The Average Duration of Human Life in Various Countries and at Different Epochs.*

In France a sixth of the population die at the end of the first year; a fifth at the end of 2 years; a third at the end of 14 years; the half at the end of 42 years; the three-fourths at the end of 69 years; the four-fifths at the end of 72 years, and the five-sixths at the end of 75 years.

Before 1789, Duvillard calculated that of 100 men, 50 live to 20 years; but since 1789 there is a marked improvement, and the observations of Bienayme, from 1823 to 1831, prove that 60, and not 50, is the true proportion. Demontferrand says that of 100 men, 7 live to 80 years, 2 to 85, 1 to 89; and that in a million of our race there are only 640 nonagenarians (from 90 to 99 years.) Matthieu stated the number at 491, and of these only 9 reach the age of 97 years, and 4 that of 99.

Centenarians, according to Duvillard and Demontferrand, exist in the proportion of 2 in every 10,000. There are, however, privileged countries. Thus at Carlisle, Milne found 9 in the 10,000. At most one dies in Paris every year.

Benoiston de Chateauneuf having examined 15 million lives, finds that 44 in 100 live to the age of 30; 23 to 60; 15 to 70; 4½ to 80, and 44-73ds to 90.

At present the average duration of life in France appears to be 39 years 8 months. Twenty years ago, Bienayme valued it only at 36 years, and Demontferrand represented it at 33 years 8 months. In 1817 it was only 31 years 3 months; before 1789, according to Duvillard, 28 years 9 months; and Villerme has established that in Paris during the 18th century it was 32 years; in the 17th, 26 years, and only 17 years in the 14th century.

In France but one septagenarian is found among every 33 individuals; one octogenarian in every 160, and but one nonagenarian in 1900. Of these last there are nearly 17,500. Matthieu, however, finds that in every 174 persons there is one octogenarian, and one nonagenarian in every 1740.

At Geneva the average duration of life was 18 years 5 months in the 16th century; 23 years 4 months in the 17th, and from 32 to 33 years in the 18th; from 1815 to 1826, it has risen to 38 years 10 months.

At present in France, as we have seen, the average duration of life is 39 years 8 months, that is to say, on our birth we have before us 39 years and 8 months of probable existence; at 4 years, a period when all the favorable chances are united, we have 49 years 4 months; according to Deparcieux, we have only 40 years and 3 months at 20 years of age; 34 years and 1 month at 30 years of age; 27 years 6 months at 40; 20 years 5 months at 50; 14 years and 3 months at 60; 8 years and 3 months at 70; 4 years and 8 months at 80; and 1 year and 9 months at 90.

In 1840 the average duration of life in England was 38 years; in France 36 years and a half; in Hanover, 35 years 4 months; in Schleswig-Holstein, 34 years 7 months; in Holland 34 years; in the Duchy of Baden, 52 years 9 months; at Naples, 31 years 7 months; in Prussia, 30 years 6 months; in Wurtemburg, 30 years, and 29 years in Saxony.

Demontferrand has divided into three classes the departments where life is the longest, and also those where it is briefest. In the first class, which is that of the longest livers, there are 28 departments: Calvados, Gers, Basses-Pyrenees, Cantal, Charente, Orne, Lot-et-Goranne, Lot, Maine-et-Loire, Aveyron, Gironde, Lozere, Deux-Sevres, Manche, Tarne-et-Garonne, Doubs, Mayenne, Dordogne, Creuse, Loire-Inferieure, Eure, Vienne, Haute-Marne, Indre-et-Loire, Haute-Loire, Ariege, and Haute-Garonne. The average duration of life for example, is 44 years 7 months in the Calvados and the Lot-et-Garonne.

The second class contains 33 departments: Jura, Puy-de-Dome, Vendee, Sarthe, Charente-Inferieure, Corse, Seine-et-Oise, Somme, Oise, Tarn, Seine-Inferieure, Correze, Eure-et-Loire, Cote-d'Or, Pas de-Calais, Ardennes, Aube, Marne, Drome, Allier, Vosges, Ille-et-Vilaine, Isere, Nonne, Var, Meurthe, Meuse, Aude, Laudes, Herault, Ain.

The third class comprehends the other 25 departments. In Finisterc and Pyrenees-Orientales, the average duration of life is only 28 years 2 months and 28 years 1 month. Females have the advantage; thus in every 100 of each sex, at 10 years there are 58 females and 53 males alive; at 20 years, 58 females and 48 males; at 50 years, 33 females and 30 males; at 60 years, 23 females and 23 males; at 70 years, 15 females and 13 males; at 80 years, 5 females and 4 males, according to Benoiston (de Chateauneuf); and although 17 boys are born for every 16 girls, the proportion is soon re-established; thus at the end of one year for every 1000 children of each sex there are 848 girls and 823 boys alive.

These observations, made with the greatest possible accuracy, are curious in the extreme, and from them the legitimate conclusion is drawn that the average duration of life in Europe, and especially in France, is increasing every year.—*Moniteur—quoted in the Gazette des Hopitaux, July 14th,* 1855.

Population and Mortality of England.

"Mr. Finlaison estimates the population of England for the close

of the seventeenth century at about five millions and a quarter of *souls*. It is to be presumed that, in fixing the amount, he has not been hypercritical in the matter of psychological qualification, and that it may therefore be taken for granted that this number expresses the sum total of unfledged bodies which moved about upon two legs in the land of the Angles at that time. At the middle of the nineteenth century, appointed enumerators found that the five millions and a-quarter had become, in round numbers, eighteen millions; that, in fact, the inhabitants of England (not taking Scotland into the account) had nearly quadrupled themselves in 150 years, besides sending countless crowds to people vast lands in the west and in the south. In the year 1851, it was found that London contained within its own precincts nearly half as many inhabitants as all the island held in 1701. On one memoriable day—the 9th of October 1851, there were collected in a single hall erected in one of its parks, a 56th part of the full complement of English people that were alive in 1701. The Registrar-General has endeavored, in his report of the result of the recent census to furnish a definite idea as to what millions mean where population is concerned. He states that if every person living in Great Britain had only a square yard to stand upon, there would be still seven square miles of the crowd when all were collected together; or if every individual were planted out over the surface of the island, as cabbages are planted out in the best arranged market-gardens, each would be 103 yards away from his neighbors. Let the entire crowd of these animated cabbages be gathered from all the corners of the land, and be required to file through Temple Bar in a column of four deep, and moving at a quick marching step, it would take three months of twelve hour days (Sundays being allowed for rest) to get the entire living stream through; if a single individual were to undertake to pass them through a gate, as turnpike men do flocks of sheep, enumerating them at the rate of one every second as they went, he would be a year and a-half, working twelve hours a day (exclusively of Sundays) before he finished his task. Now, it has been ascertained that this vast mass of people is at the present time occupied with doubling itself every fifty-two years and a-half; so that if the same state of affairs were to continue without interruption or change until the year 2534, the inhabitants of Great Britain, instead of each having the space of 180 square yards to himself, would all touch each other by the elbows. There would be just standing room for all, but no one must

think of moving. Britannia, with its eleven degrees of longitude and ten of latitude, would then look from the ocean like a huge rock covered by its impenetrable crowd of penguins or boobies. Such, indeed, under these circumstances, would be the prospects of our favored land.

These considerations are surprising in themselves; but there is an important fact connected with them, that greatly enhances the wonder with which they are contemplated when it is brought prominently into view. This rapid augmentation in the ranks of the population has gone on, not only in despite of a constant emigration to foreign lands (more than two millions and a-half of individuals emigrated between the years 1821 and 1851,) but also in the face of the yet more serious drain from the operation of the ordinary conditions of mortality. More than 1000 people died every day in England and Wales during the year 1850.

Of the eleven millions who were alive in 1801, eight millions had passed to the silent tomb, before those eleven millions had multiplied into twenty-one millions in 1851. Before the twenty-one millions can become forty-two millions, which they would do by 1904, under the present rate of increase, at least thirty millions will have been swept from the earth, by either premature or natural decay. By that time nineteen millions of British subjects will also have found a foreign home, even if the rate of migration does not increase with augmenting numbers. But emigrants double their ranks in considerable less time than half a century, on account of their consisting almost exclusively of individuals included within the reproductive periods of life. Hence, the nineteen millions British emigrants scattered over the world will be really more than thirty-eight millions in their new houses. If then, the existing state of things be continued without modification for another half-century, it may fairly be assumed that the twenty-one millions at present inhabiting our island will have changed themselves into a hundred millions of souls. In reality, it is known that this rate of multiplication does not take place over any large area of the earth, on account of various modifying and repressing influences that are continually at work. Thus, although the population of Great Britain nearly doubled itself in the half-century that preceded 1751, there was an absolute diminution of numbers in the year 1850, if taken alone. In that year the excess of births over deaths amounted to 224,000; but 280,000 emigrated during the same period. There were 56,000 more departures

than arrivals; and the British field of human plants was therefore thinned out rather than thickened, in this interval. Still the abstract fact remains, that the real reproducing power of man in a state of civilization is expressed by a fivefold increase in half-century periods; at the lowest estimate, when every circumstance is favorable to the result, twenty millions made into a hundred millions living and dead, may be taken to be a rude expression of the powers of human fertility.

The numbers in any population, where the births represent all arrivals, and the deaths all departures, must always be in a certain ascertainable ratio to the mean duration of individual life, taken in connection with the amount of the additions by birth in each year. The number of yearly births multiplied by the mean length of individual life in years, under such circumstances always gives the sum of the population. Thus, in 1851, when England and Wales contained eighteen millions of people, the births amounted to about 600,000; and accordingly the average duration of individual life would have been fifty years, if there had been no other drain upon the numbers than that produced by death ($600{,}000 \times 30 = 18$ millions). In reality, however, as the eighteen millions represented a result lowered by the drain of emigration, as well as by that of death, the true value of individual life was considerably higher. It is only under circumstances of great exposure to deleterious influences that the expectation of life sinks so low as this in England. In the worst managed workshops in London, where men of intemperate habits sit long in a close, impure atmosphere, the average duration of life does not rise above thirty-two years; but in cities generally it reaches thirty-eight years, and in the open country, as high as fifty-eight years.— *Virg. Med. and Surg. Journal, from Mann's Philosophy of Reproduction.*

ART. VIII.—*Living Streams, or Illustrations of the History of the Blood.* BY DR. JAMES PAXTON.

It is by means of the blood that every power which constitutes vitality is originated, completed, and controlled; hence the necessity of maintaining its normal condition. Frequently the first impression of the nature of the disease is derived from the color of the blood displayed in the integuments, as in anemia, cancer, &c. "Every disease is a local expression of alteration of the blood," therefore a

knowledge of the hæmatic system becomes a key to an intimate knowledge of the disease. The blood is a living fluid, consisting of innumerable independent cell beings, existing in an albuminous fluid, some of these are red, others opal white, while a third series is perfectly colorless. All are endued with an executive power, and each cell individually and corporately pursues a certain path to the attainment of a certain end. The development of the blood is four-fold, and comprehends—1. The Chylid; 2d. The Hæmatid; 3d. The Lymphid; 4th. The Liquor-sanguinis.

1. *The Chylid.*—It is found in the thoracic duct and receptaculum chyli, floating on the liquor chyli. The chylids vary in size and tint, and are sometimes twice as large as the blood corpuscle. It has been supposed that the change into a blood corpuscle, might take place in the receptaculum chyli; but this is of rare occurrence. The cell contains a nucleus, which has been supposed to be the ovum or germ, but it is by the quickning of the chylids that the hæmatids are brought into existence as infusorial animated organisms, a peculiar species of *protozoa*, which possess the faculty of spontaneous vesicular motion, independent of the aid of the heart. In plants, as well as in animals, there is a power distinct from the vis a tergo, by which the blood corpuscles and sap-globules traverse their respective vessels, for the hæmatic movements have been observed in the mammalia to commence before the development of either heart or vessels. How can we account for this, and also for the progression of the lymph and chyle in their vessels, unless we admit, that these bodies manifest animalcular powers capable of producing change of place. Muller thought that the change in tint might be from red particles regurgitated from the venous trunk into the thoracic duct. However this may be, the chylids are converted by some unknown process into hæmatids, the quantity and quality of which will depend upon the age, nutrition and food of the animal. The liquor chyli entirely unchanged, supplies the waste of the liquor sanguinis.

2. *The Hæmatids.*—In man they are biconcave, and occasionally double convex. Diseases, as we shall presently see, greatly alter their figure. They vary in size in the same individual. They are larger in the fœtus than in the adult, one cubic inch contains 126,976 millions of them. These are animals whose simple structure is reduced to a single cell, but possessing all the characteristics of living animalcules.

3. *The Lymphids.*—When the chylids are introduced into the vena

cava, if the constitution be weak, some remain to all appearances the same, and are called lymphids—pale blood-cells. Their vital powers are of an inferior order. They are colourless vesicles containing several nuclei: they abound in chlorotic and cachectic persons, and constitute a morbid affection, called by Dr. Hughes Bennett, leucocythæmia. Addison says that pus globules, exudation cells, and epithelium originate from them. The are partly appropriated to the repairs of organic waste, and become incorporated with the tissues of the system.

4. *The Liquor Sanguinis.*—This cannot be considered vital. It is the fluid in which the hæmatids and lymphids live, move, and exist. Continually replenished by liquor chyli, it furnishes food to living hæmatids, in every stage of their existence. It is the blastema and pabulum of organization from whence all organizable material is derived.

The Respiration of the Blood.—If deprived of pure air, the hæmatids fail in their energies. The inspiration of noxious gases, such as carbonic acid gas, &c., &c., has the most serious effect on the hæmatids, in fact they are suddenly asphyxiated. By sleeping in ill-ventilated rooms, the hæmatids become enfeebled, and their executive power diminished; the same in some diseases—the hæmatids become oppressed by the carbon which ought to be extricated; hence coma supervenes, and the patient dies literally "poisoned by his own blood."

The effects of Poison on the Blood.—Blood acted on by chloroform, shows the gradual solution of the cell-wall of the hæmatids. The poison from the bite of snakes renders the blood very fluid: it has no tendency to coagulate. The virus mixing with the liquor sanguinis is quite sufficient to destroy the whole community of hæmaids. All poisons affect the hæmatid vitality, some chemically, some by paralyzing, others by asphyxiating them.

In purpura and scorbutus there is an evident disintegration of blood, innumerable hæmatids perish and become effused into the tissues. Under the microscope the globules were changed from a flattened to a sphericle form. The liquor sanguinis contained a solution of hæmatin.

Condition of the Blood in Fever.—The blood in fever is deserving of particular attention. It is more than probable that the cause of fevers is owing to some poison gaining access to the liquor sanguinis. Dr. Alison considers the blood as "not simply changed in its chemi-

cal constitution, but in its vital qualities by which that constitution is regulated and maintained.," Whatever be the mode in which the morbific cause of idiopathic fever affects the circulation, it is to the direct action of this cause, and not the diseased action excited locally, that we must ascribe the enfeebled state of the circulation, the peculiar vitiated condition of the secretions, and the derangement of the nervous system. Indeed most fevers must be ascribed to morbid alterations in the structure and composition of the blood. With respect to the state of the liquor sanguinis, in this, as well as in most other diseases, it is liable to great variations, corruptions and deficiencies. While passing through the lungs, the blood may be exposed to Malaria, or suffer from the reception of infectious exanthemata. The Liquor Sanguinis probably is the vehicle which conveys the poison to the hæmatids.

One of the most frequent symptoms of fever is red-coloured urine —it is the result of a dissolution of vast numbers of hæmatids. In the ulterior stages, hæmatin is deposited beneath the epidermis, in violet or livid spots. In yellow fever the hæmatids perish, and escaping into the stomach are exposed to the action of the gastric juice, are decomposed and rejected by vomitings. This is the well-known "black vomit," always indicating a fatal termination. An attack of this disease invariably deprives sanguineous protozoa of life. "The appearance of the blood is always thin and black, and there is hemorrhagic lesion of the mucous and submucous tissues, of the alimentary canal." "In serious cases," says Dr. Stevens, "we find in place of blood, a fluid black as ink, obviously unfitted to perform the offices of the circulation." Often death ensues from copious hemorrhagic dejections. There is no author, ancient or modern, except Cullen and the solidists, who has not described fever as consequent on a vitiated or normal condition of the blood. As, "blood-globules loosely compacted, serum watery and vapid, so as from this pituitous state, all the secretions are imperfect or insufficiently participant of an animal nature. The bile becomes inert, the animal spirits flat and deficient, the saliva a mere insipid mucus," and so on. The above is quoted from "Huxham's Essay on Fever." He concludes this passage by saying—"The slimy lentor of the blood stagnates up to the heart," &c. The signification of these, and more modern, and somewhat less incorrect representations of the doctrines of fever, according to our views, may be explained in the following order.

1. The poison of fever deprives a certain portion of the hæmatids of

cava, if the constitution be weak, some remain, to all appearances the same, and are called lymphids—pale blood-cells. Their vital powers are of an inferior order. They are colourless vesicles containing several nuclei: they abound in chlorotic and cachectic persons, and constitute a morbid affection, called by Dr. Hughes Bennett, leucocythæmia. Addison says that pus globules, exudation cells, and epithelium originate from them. The are partly appropriated to the repairs of organic waste, and become incorporated with the tissues of the system.

4. *The Liquor Sanguinis.*—This cannot be considered vital. It is the fluid in which the hæmatids and lymphids live, move, and exist. Continually replenished by liquor chyli, it furnishes food to living hæmatids, in every stage of their existence. It is the blastema and pabulum of organization from whence all organizable material is derived.

The Respiration of the Blood.—If deprived of pure air, the hæmatids fail in their energies. The inspiration of noxious gases, such as carbonic acid gas, &c., &c., has the most serious effect on the hæmatids, in fact they are suddenly asphyxiated. By sleeping in ill-ventilated rooms, the hæmatids become enfeebled, and their executive power diminished; the same in some diseases—the hæmatids become oppressed by the carbon which ought to be extricated; hence coma supervenes, and the patient dies literally "poisoned by his own blood."

The effects of Poison on the Blood.—Blood acted on by chloroform, shows the gradual solution of the cell-wall of the hæmatids. The poison from the bite of snakes renders the blood very fluid: it has no tendency to coagulate. The virus mixing with the liquor sanguinis is quite sufficient to destroy the whole community of hæmaids. All poisons affect the hæmatid vitality, some chemically, some by paralyzing, others by asphyxiating them.

In purpura and scorbutus there is an evident disintegration of blood, innumerable hæmatids perish and become effused into the tissues. Under the microscope the globules were changed from a flattened to a sphericle form. The liquor sanguinis contained a solution of hæmatin.

Condition of the Blood in Fever.—The blood in fever is deserving of particular attention. It is more than probable that the cause of fevers is owing to some poison gaining access to the liquor sanguinis. Dr. Alison considers the blood as "not simply changed in its chemi-

cal constitution, but in its vital qualities by which that constitution is regulated and maintained.," Whatever be the mode in which the morbific cause of idiopathic fever affects the circulation, it is to the direct action of this cause, and not the diseased action excited locally, that we must ascribe the enfeebled state of the circulation, the peculiar vitiated condition of the secretions, and the derangement of the nervous system. Indeed most fevers must be ascribed to morbid alterations in the structure and composition of the blood. With respect to the state of the liquor sanguinis, in this, as well as in most other diseases, it is liable to great variations, corruptions and deficiencies. While passing through the lungs, the blood may be exposed to Malaria, or suffer from the reception of infectious exanthemata. The Liquor Sanguinis probably is the vehicle which conveys the poison to the hæmatids.

One of the most frequent symptoms of fever is red-coloured urine —it is the result of a dissolution of vast numbers of hæmatids. In the ulterior stages, hæmatin is deposited beneath the epidermis, in violet or livid spots. In yellow fever the hæmatids perish, and escaping into the stomach are exposed to the action of the gastric juice, are decomposed and rejected by vomitings. This is the well-known "black vomit," always indicating a fatal termination. An attack of this disease invariably deprives sanguineous protozoa of life. "The appearance of the blood is always thin and black, and there is hemorrhagic lesion of the mucous and submucous tissues, of the alimentary canal." "In serious cases," says Dr. Stevens, "we find in place of blood, a fluid black as ink, obviously unfitted to perform the offices of the circulation." Often death ensues from copious hemorrhagic dejections. There is no author, ancient or modern, except Cullen and the solidists, who has not described fever as consequent on a vitiated or normal condition of the blood. As, "blood-globules loosely compacted, serum watery and vapid, so as from this pituitous state, all the secretions are imperfect or insufficiently participant of an animal nature. The bile becomes inert, the animal spirits flat and deficient, the saliva a mere insipid mucus," and so on. The above is quoted from "Huxham's Essay on Fever." He concludes this passage by saying—"The slimy lentor of the blood stagnates up to the heart," &c. The signification of these, and more modern, and somewhat less incorrect representations of the doctrines of fever, according to our views, may be explained in the following order. 1. The poison of fever deprives a certain portion of the hæmatids of

life. 2. The dead exercise a pernicious effect on the living, by impeding their progress through the vessels. 3d. In a short time the former undergo decomposition, act as a deleterious substance, which, so long as it remains, greatly incommodes the sanguinous transit. "Pulsus parvus, debilis plurumque frequens; urina parum mutata; sensorii functiones plurimum turbatæ; vires multum imminutæ," describes the result. 4. The liquor sanguinous, now containing the debris of hæmatids, which have probably acquired new chemical characters, is oppressive to the system, and for the nutrition of the organisms useless.

We are sure that in typhus fever some peculiar matter, generally an effluvia, has been absorbed, and has made an impression on the blood. In fever arising from malaria the morbid poison has been received through the lungs, and it is supposed to be multiplied in the blood. In a majority of cases of malignant fever, "there is a materies morbi evolved from the blood making the disease contagious." The mode of propagation through the mass of blood is by the results of its decomposition. And so long as the effects of the poison remain in the vascular system, that is if any quantity, even the least quantity of dead matter remains, it interferes with the functions of the living protozoa, by impeding the course and regular operation of these vital powers. Under such circumstances the formation of chylids fails, and the number of hæmatids is speedily diminished. Dr. Watson justly observes—"That all analogy is in favor of the belief, that in fever the primary change is in the blood itself, and through its intervention on the brain and organic functions." As the blood is the source from whence all these powers are derived and from which every secretion originates, so these functions are healthy in proportion to the healthy condition of the blood. Have we not in cases of typhoid fever perceived an extraordinary fœtor in the perspiration and other evacuations? and are not the attendants powerfully affected by it? These effects can only be accounted for by morbid evaporation and decomposition of a certain portion of the tissues dissolved in the blood, the component parts of which have entered into combinations injurious to the hæmatic corpuscles. At the commencement of typhus the hæmatic animalcules are partially paralyzed—incapable of their work of communicating energy to the nervous centres. Hence this disease occasions an overpowering lassitude and mental dullness. And we can scarcely doubt that the attack has been detrimental, chiefly, to the hæmatids. Their dissolution in the

watery part of the liquor sanguinis is disposed of by the kidneys, and may be detected in the urine, "the coloring matter of which is a decomposition and solution of blood-discs." The disorganized hæmatids are said, by Vogle and Nasse, to leave the body by no other channel than the urinary organs. It therefore follows that we possess in the color of the urine the ready means of ascertaining, in a given time, whether a large or small quantity of hæmatids are decomposed in the animal economy. In the normal condition two parts to the six of coloring matter are voided, and this expresses the normal loss and reproduction of hæmatids. A chlorotic invalid or a patient who passes little coloring matter in the urine would have little change and reproduction of these bodies. Every one whose urine is high coloured would require a constant supply of hæmatids to recruit the loss. The grounds on which this hypothesis rests, are the following: "In all cases where there is a discharge of red urine, with increase of coloring matter, as in fever and inflammation—there we observe, as a common result, a decrease of the blood-corpuscles and a corresponding anæmia. But where there is noticed diminished productions of these corpuscles, with very sparing disintegration, as in cases of debility, there we find little excretion of the coloring matter in the urine."

Effusions in the form of vibices and petchiæ from the latter feature of the disease, obtained the name of *petchial fever*. The cases in fever hospitals are almost invariably distinguished by this characteristic of hemorrhagic diathesis. When the spots assume a livid, black, or greenish colour, we may predict the near approach of a fatal termination. But signs of exudation are not confined to the surface of the body, the mucous and serous membranes of the internal organs are marked by similar deposits. Now as it cannot be doubted that the remote cause of fever is the reception of a specific poison into the circulation, neither can we doubt of the immediate cause being its pernicious effects on the protozoa of the circulation, when applied through the intervention of the liquor sanguinis to those living organisms. According to the intensity of the poison is the rapidity of their destruction. The dead hæmatids impede the operations of the living community, contaminate the fluid of the vessels, and in a great degree suspend every performance of the vital phenomena. Liebig as a chemist thought the perceptible effects of febrile poison were analagous to fermentation. It is an apt comparison, but the pathologist is compelled to take a different view of the question.

There are other modes by which hæmatid structures may suffer and die, thereby producing symptoms resembling those which occur in typhus. On the failure of the potato crop in Ireland, in 1847, thousands of the poor were deprived of their accustomed food, and in consequence a disease called *famine fever* was produced. The great mortality of that period may be pathologically ascribed to a want of organic materials for the production of chyle and chylids, the sources from which hæmatids originate and are supported. The subsequent stages in the progress of this affection are, that owing to insufficient blastema (liquor sanguinis) numbers of hæmatids perish, and they fall into a state of decomposition. As this change takes place, the materies morbi is fully developed and typhus established in the system. The death and putrefactive decomposition of hæmatids constitute the essence of typhoid fever. Some of the new products which are formed in fever pass away in a liquid state by the skin or kidneys, and by natural evacuations, other matters are volatilized and escape in a gaseous form from the body. And we are warranted in assuring that the miasma of infection is contained in the gaseous compounds which are expelled from the lungs of the sick, or are voided from other organs.

The development of the material of contagion in such a state of things is not dissimilar to the generation of malarious gasses, which, under certain conditions, arise from the decomposition of organic remains in confined and unhealthy buildings or over-built towns. Persons in general are unconscious of the value of atmospheric purity; without this essential condition, the hæmatids are deficient in vigorous growth, and there is a low standard of health.

Whether the access of the materies morbi acts immediately on the hæmatids on its first reception, or by means of the liquor sanguinis, in which they are immersed, remains undecided. By whatever means the blood suffers from febrile or other poisons, the injuries inflicted on the sanguineous protozoa are the sole cause of every distressing symptom we are called to witness.

In fevers assuming the typhoid type, the physical elements of the hæmatids combine with the secretions, and are evident, not only in the urine, but the dark fur on the tongue, and the sordes on the teeth, are occasioned by disintegrated hæmatids collected in the mucus of those parts which are colored by the hæmatin of these bodies.

Abundant manifestations of the pernicious effects on the hæmatids occur in plague, by infiltration of their elements in the cellular tissue in large blue or purple spots (maculæ nigræ of Dr. Russell) on the body and limbs. From the same cause carbuncles commence as vesications, filled with dark fluid indicating a disruption and death of the blood. Hence Hecker is correct in maintaining that the plague is owing to a decomposition of the blood. Almost every one attacked with this species of fever becomes "a mass of putrefaction covered by vibices and gangrene." When this disease appeared in Germany and the northern kingdoms, in the middle ages, it was called the *black death*.

The Effects of Cholera on the Blood.—There is a peculiar affection of the blood in malignant cholera, by which the nervous system and the whole vital functions of the body are, in a greater or less degree, deranged or entirely suspended. During an attack of this disease the hæmatic life is so enfeebled that it can no longer appropriate to its use the materials of the liquor sanguinis. Therefore the water, the fibrin, the albumen, and the salts contained in the circulation escape from its current, leaving the hæmatid structures deprived of vitality. My friend Mr. Feld, of St. George's Hospital, in 1854, found the blood nearly uncoagulated and almost the consistence of soft butter. Under the microscope he observed a large quantity of epithelium, oil globules, and colorless corpuscles, besides crystals of triple phosphate. The ordinary hæmatids had the outline altered, their structures were corrugated or ragged, as if corroded.

The experiments of Drs. Garrod and Parkes, in this disease, were numerous, and conducted with much accuracy. An analysis of the blood shows the amount of solid constituents was 256 to 257 in 1000; while in the healthy standard there were 200 in 1000. The draining away of the watery parts was certainly the main phenomenon. So much of the colorless matters having been expended, leaves solely black tenacious blood totally unsuited for transmission through the pulmonary vessels. In many of the worst cases, the cutaneous exudation is greatly increased, a watery fluid being poured out by the whole surface of the skin as well as by the mucous membrane of the intestines. This disintegration by which the fibrin, albumen, salts, and the water were spasmodically excluded, constituted a marked feature of the disease. It was undoubtedly the cause of the coldness of the body. We have con-

sidered that the thickness of the blood, owing to a loss of water and salts, is sufficient to account for its arrest in the capillary system. "An essential condition for the normal process of nutrition and the chemical process of respiration on which the temperature of the body is dependent, seems to be a certain portion of water in the blood." Mr. Grainger has described cholera as a disease of the blood. The results, also, which have been obtained by continental pathologists have been the same; namely, that the first impression is aërial, acting as a poison on the blood. Every one might have observed, at the first glance, this extraordinary condition. Very recently it has been submitted to a closer examination, and red irregular oviform bodies were discovered in considerable numbers. It is well known that the "qualitative and quantitative condition of the blood is in an abnormal state." A shrivelling of the hæmatids has been noticed by others. Post-mortem inspections have revealed a morbid structural alteration in their form. Examined by the microscope they were scarcely recognisable as such. Some were granular in their general aspect, others were transformed into free epithelial nuclei. In many, a delicate cell-wall was developed in such a direction round a nucleus as to give a caudate appearance to the cell. A few were irregular in their shape, and more resembled the bodies usually figured as tubercle corpuscles. The following particulars are deserving of notice.

a. Granularity or haziness of the hæmatids.

b. Peculiarity of their reaction with acetic acid, in acquiring the appearance of pus globules.

c. Irregularities in their tendency to aggregate into roulox.

d. Excess of lymphids, chiefly in anæmia patients.

The chemical changes also have met with some attention, but of themselves are insufficient to account for the symptoms in any of the stages. The mere chemical elements of blood vary in their quantities, within certain limits, without meat, drink, and habits of life. It is probable that we might approach nearer to the solution of a difficult question—the proximate cause of disease—by a more extended research into the structural organisms of the blood. The illustration just cited, is an advance in the inquiry, if not fully a confirmation of such an opinion. We may be assured that no morbid affection, whether local or constitutional, can exist without a previous derangement of the blood. In restoration likewise to a sanitary standard may be traced the wonderful powers of the

hæmatids in repairing deficiencies and recruiting losses occasioned by the injurious operation of morbid attacks on sanguineous vitality. At present the few examples here selected may serve as a clue to further inquiry.

The Blood in Tuberculosis.—In consumption, Ancel describes the hæmatids "deficient in numbers and defective in vital properties." And it is always found that with a decrease there is a corresponding decrease of strength in the patient. Andral found the blood, in this disease, in no one instance, as reaching the physiological average of health. The appearance of the blood, in consumptive and scrofulous patients, is roseate, the coloring matter being extravasated and separated from the hæmatids. The liquor sanguinis and these bodies, in many cases, have assumed the same tint. Spheroidal and lenticular corpuscles are constantly found in these affections. So manifestly are they altered, that their figures are represented as "irregularly circular, or elongated, or notched."

The Blood in Local Inflammation.—At the commencement of inflammation, "the current oscillates in the capillaries, and then ceases to flow. That is—1. The blood flows with a greater rapidity. 2. The vessels become enlarged and the current is slower. 3. The flowing is irregular, that is, it flows backwards and forwards—sometimes stops for a peried and then resumes its course. 4. All motion of the blood ceases and the vessels are distended. 5. Lastly, the liquor sanguinis, and sometimes the red corpuscles, exude through the vessels." Such is an accurate account of the progress of inflammation, attended with exudation. According to the present theory it admits of the following explanation. 1. Some injury having been inflicted from within or without, which causes excitement of the hæmatic beings, an effort follows which is communicated to the nerves and vessels. 2. The excitation or exertion, as with all other animated nature, is succeeded by exhaustion of animal power. 3. There is partial interruption or suspension of their usual functions. 4. A number of the hæmatids are deprived of motion. 5. The vessels lose their vital tone and yield to the pressure of accumulated blood. 6. There is exosmose of the liquor sanguinis and sometimes of the hæmatin. These are the stages in the rise and progress of inflammatory action and deposits.

To the preceding might be added the physical alterations of the blood in many other affections; even in mental weakness a similar condition presents itself, indicating the relation between the san-

guineous and nervous functions. If the hæmatids are abnormal the brain is liable to receive false impressions. The blood of upwards of 2000 patients in the Crichton Royal Institution for the Insane, has been submitted to microscopical examination, and the hæmatid deformities or "blood changes" in these cases are deserving the attention of pathologists. Dr. Lindsey has published his investigations, and these changes are fully described by himself.

Illustrations of the theory of hæmatism might be multiplied, but we trust sufficient has been exhibited to lead to the inference, that the blood-cells are organized sensitive beings, endowed with the properties which characterize animal life. By means of these the special tissues receive power to elaborate the secretions and carry out the requirements of the animal economy. It is acknowledged that this outline of hæmatism is very imperfect, yet we trust it will serve as an introduction to further inquiry, and at least to exemplify the nature of the living principle.

Life was supposed to be the "breath," yet this is only one of the manifestations of vitality. The ordinary and more intelligible notion is, "an active state of organic structure;" this is another manifestation. But life is one thing and the mode of its exercise is another. The latter has been a subject of as much controversy among physiologists as the former; for wherever life exists the next inquiry is, how and by what means is it exercised? The history of hæmatism must furnish a reply. In all our practical investigations we are enabled to learn that the blood has the sole dominion over every animal organization. The phenomena of nervous sensation, glandular secretion, and muscular motion, may be regarded as various modes by which the hæmatid functions are displayed in their influences and control over each organ of the body. That the blood is the executive of the living animal there is accumulated evidence. 1. By the abstraction of blood producing a corresponding abstraction of vital energy. 2. Tying the artery of a limb limits its power, so far as it cuts off the supply of blood; and a normal vigor is not regained until its usual quantity is restored by collateral channels. 3. Plethora consists in an excess of hæmatids, and consequently an inconvenient crowding of the vessels. 4. The opposite condition is anæmia, denoting a deficiency of hæmatids. 5. Mental or physical causes, which disturb the circulation of the blood, immediately influence the whole vital economy. 6. Those parts which are invested with great sensitiveness, as the lips, the tongue, and some of

the mucous membranes, are exceeding vascular and obviously abound with hæmatids. On the contrary, were the structure of parts, as the tendons, the cartilages, and the cornea contain no hæmatids, then are they destitute of vital sensibility. But no sooner are these textures, by disease, rendered vascular, than they become sensitively painful. Life, therefore, might be expressed by the word hæmatism. It has been the object of this essay to illustrate its manifestations under various circumstances, which occur in the hæmatic sphere of action. Moreover, if the animalcular theory of the blood be true, and if vital energy centers solely in the hæmatids, it is no longer a doubtful question. What is the nature and constitution of the erroneous term *living fluid?* The hæmatic protozoa which inhabit the vessels are the only portion of the blood endowed with the attributes of life.

We close this outline of the natural history of the blood, regarding it as a column of active instructive beings in every artery and vein. Continually, in transita by a branching and tortuous route, they reach all parts of the system. And all service is derived from these organisms,—strength and weakness may be measured by the number supplied to the muscles and nerves. The hæmatids possess the necessary qualities for the administration of the powers requisite for every portion of the organic apparatus of the animal structure and for the accomplishment of every function.—"*Living Streams,*" *p.* 30.

PART THIRD.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

A Treatise on Medical Jurisprudence. By FRANCIS WHARTON, Author of a "Treatise on American Criminal Law," "Precedents on Indictments," "American Law of Homicide," etc.; and Moreton Stille, M. D., Lecturer on the Principles and Practice of Medicine in the Philadelphia Association for Medical Instruction. Philadelphia: Ray & Brother, Law Booksellers and Publishers, 17 and 19, South Fifth-st., 1855. [For sale by Riley & Co.

This work is the joint production of a lawyer and physician. All the works on this subject, that we are aware of, except one, and

that now out of date, have been prepared by gentlemen belonging to either one or the other of the professions, and *cæteris paribus* do not possess the advantages of this.

Two leading objects seem to have been kept in view in the treatise before us—first, the incorporation into its pages the results of late continental, and particularly French and German research; and secondly, the bringing together for the same view, the legal and medical points, so that the information required by each profession might be collected and reviewed at the same time and with the same compass.

The usual range of medico-legal exposition as set forth in most works embraces much that although interesting to the medical man, is unnecessary to the legal practitioner, and it is also equally clear that there are many points upon which the latter needs information, which the former, either from inadvertence, or from what would be to him their extreme simplicity, may forbear to touch, and *vice versa.* Concurrent authorship—a work that is the joint production of lawyer and physician, therefore, is the most likely to result in what is more available.

In pursuance of the general scheme, the second, third, fourth and fifth books—viz.: those on "The Fœtus and New-Born Child," on "Sexual Relations," on "Identity," and on "The Causes of Death," were assigned to Dr. Stille, with the exception of those sections in the two former which concern the legal relations of gestation, abortion and rape, while to Mr. Wharton fell the preparation of the fifth and sixth books, embracing mental unsoundness and the legal relations of homicide, together with the general disquisition on "Indicatory Evidence."

With reference to the capacities and opportunities for information which have been brought to bear in the production of the work before us we can say but little, except in reference to Dr. Stille. Endowed by nature with very fine abilities, and possessed of great habits of industry, Dr. S. distinguished himself at home as a cultivator and teacher of medical science. Besides, he went to Europe in 1844 and resided there three years, visiting most of the important seats of learning. His education thus liberalized, fitted him very appropriately for the undertaking upon which he expended the last of his earthly toils. Of Mr. Wharton, we may say there is every reason to expect, from his legal learning and position, a work of more than ordinary merit.

We have looked through this work, and although we have no room for a further analysis of its contents, or a comparison of these with what is found in other works on the same subject, those, nevertheless, who will be at this trouble, will be impressed very much in its favor as a modern expose of the great and growing subject of Medical Jurisprudence.

An Introduction to Practical Pharmacy; designed as a Text-Book for the Student, and as a Guide to the Physician and Pharmaceutist, with many Formulas and Prescriptions. By EDWARD PARRISH, graduate in Pharmacy, member of the Philadelphia College of Pharmacy, and of the American Pharmaceutical Association, and Principal of the School of Practical Pharmacy, Philadelphia. With two hundred and forty-three illustrations. Philadelphia: Blanchard & Lea, 1856, pp. 544. [For sale by Riley & Co.]

Physicians, as well as students, have long since felt the neccessity of a work on Pharmacy, which should contain the leading facts and principles of the science arranged for study, and with special reference to those features of the subject which possess a practical interest. The work before us will therefore meet with a very cordial reception, particularly from that large class of practitioners of medicine to whom Pharmacy is necessarily a collateral pursuit. We may remark, for the purpose of giving something more of the scope of the work, that it is divided into five parts.

Part I. embraces several chapters, among which Meteorology, Weights and Measures, and Specific Gravity are considered.

Part II. is occupied by Galenical Pharmacy, the mode of preparing each of the various classes of permanent vegetable preparations.

Part III. is devoted to the classification of plants, giving a synopsis if the leading articles of the materia medica, arranged on the basis of chemical composition.

Part. IV. contains the essential facts in regard to the inorganic medicines.

Part V. contains the directions for preparing, selecting, combining and dispensing medicines, illustrated by a considerable number of formulas variously written, in Latin and English, abbreviated and unabbreviated.

Taken altogether, this work is well suited to the wants of the profession, and should receive the patronage so richly merited by its author.

The Transactions of the American Medical Association, instituted 1847, Vol. VIII., Philadelphia: Printed for the Association. By T. R. ZAND, P. G. Collins, 1855, pp. 763.

Besides the minutes of the last meeting, report of the committee on Publication, report of the Treasurer, etc., this volume contains papers on quite a variety of subjects. The following may be enumerated: Report on diseases of Missouri and Iowa; report of the committee on the hygrometrical state of the atmosphere in various localities and its influence on health, by S. D. Hunt, of Buffalo, New York; report on the diet of the sick, by Charles Hooker, M. D., New Haven, Connecticut; the pathology, etc., of scrofula, by Wm. H. Byford, M. D., Evansville, Ia.; report of the committee on the means of preserving milk, and on the influence of pregnancy and menstruation on the composition and nutritive qualities of that fluid, by N. S. Davis, M. D., Chicago, Illinois; report of the committee on dysentery; the effects of alcoholic liquors in health and disease, by R. D. Mussy, M. D.; sketch of the caustic pulverizer, by R. H. Thomas, M. D.; prize essay—statistics of placenta prævia, by J. D. Trask, M. D.; plan of organization of the American Medical Association; officers of the Association for 1855; list of permanent members.

Any one who has no higher ambition than that of wishing to keep up with the times, should possess these transactions. The preparation of several of the papers has involved a considerable amount of labor, and, not on this account, but on others, are decidedly meritorious.

On Bandaging and other operations of Minor Surgery. By F. W. SARGEANT, M. D., member of the College of Physicians of Philadelphia, one of the Surgeons to Will's Hospital, etc., etc. New edition; revised and enlarged, with one hundred and eighty-one illustrations. Philadelphia: Blanchard & Lea, 1846, pp. 358. [For sale by Riley & Co.]

The manner in which the *first* edition of this little manual was received has induced the author to make a thorough revision, adding to it whatever seemed to him calculated to augment its usefulness.

The object of the author has been to present to the young surgeon and physician information relative to the art of bandaging, and many other points of equal importance, which it is impossible

to elaborate fully in systematic courses of lectures, and which are but partially considered in published treatises on surgical science. The effort of the author is very successful. He has executed his labor in a manner that will secure for the work a ready sale.

PART FOURTH.

EDITORIAL AND MISCELLANY.

REGISTRATION LAW.—At the meeting of the State Society for 1854, we were appointed on a committee to procure the enactment of a Registration Law; and subsequently the American Medical Association, at its session in Philadelphia, last year, appointed a committee for the Union, consisting of one member from each of the States where there is no law of the kind. On this committee we were placed for Ohio. After these appointments, we felt under obligation to bring the subject, as early as possible, before the Legislature now in session, and consequently have had a bill presented embracing the essential provisions most likely to bring about correct and available results. The bill provides for a registration of the births, deaths and marriages, together with all the circumstances of each deemed important.

Investigations of this character have long been in existence. The Romans had their registries. Geneva, however, in the middle of the sixteenth century, seems to have had the first regular system of registration of marriages, births and deaths. "Subsequently, most of the European nations have followed the example of Geneva, and their results for several periods may be found elaborately given in the sixth annual report of the Registrar General of England, 1847." From this, it is seen that in England, the per centum of *annual* mortality is 2.205; *one* death to forty-five living. In France, per cent. 2.397: one death to forty-two. In Prussia, per cent. 2.658; one death to thirty-eight. Austria, per cent. 2.995; one death to thirty-eight. Russia, per cent. 3.590; one death to twenty-eight. From these figures, life seems to be much shorter in Russia and Austria than in England.

We have before us the *Mortality Statistics* of the *census* of 1850. This furnishes the only attempt that has ever been made in our country to obtain the *mortality* during one year in all the States of the Union. The effort has been as successful as could, *a priori*, have been expected. Still it contains many errors inseparable from the first workings of a system having for its object so much not only new but difficult of accurate execution. The returns, for example, show Mississippi to be a healthier State than Rhode Island.

In regard to the assigned causes of death, there must, under the best regulated system, be more or less uncertainty. In communities, however, such as we have in most of the counties of Ohio, where there is about one physician to every one thousand inhabitants, an approximation may be reached entitled to very general confidence.

From the returns, it appears that the mortality in Ohio, from all causes, for the year 1849, was 28.957. Of this number, 16.138 are set down as having died from *zymotic* diseases, and 4.025 from diseases of the *respiratory organs*. According to this showing, about three-fourths of the mortality of Ohio seem due to typhoid fever, its analogues, and the various forms and phases of pulmonary disease.

Ohio needs a registration law of her own. She has reached a position in civilization to appreciate inquiries other than those connected with *"profit and loss;"* and what more appropriate than an investigation of the causes that tend to abridge the period of human life? Man is man, the world over, but the period of his life varies with the circumstances by which he is surrounded. Surrounded favorably, he enjoys life and reaches his greatest physical and intellectual development, and dies contentedly, because he is worn out. On the contrary, situated in localities abounding in poisoned air, he becomes physically dwarfed, distorted, and *suffers* instead of enjoys his existence.

We have within the limits of our State about two millions of human organisms. Whether nucleated in towns and cities, or spread over the valleys and table-lands, they are all under the influence of agents more or less deleterious in their effects. Countries that have appreciated such truths with reference to their population, and acted upon their suggestions, have been enabled to abridge their annual mortality one-half. A similar result, in some localities of our State, no doubt, might be witnessed from a good registration law.

Dr. M. B. Wright's Report on Medical Ethics.—This report constitutes a part of the transactions of the State Medical Society of Ohio, and that our readers may know something of its history, we submit a few facts.

For some time a disposition has been manifested, upon the part of some of the members of the State Society, to subvert entirely our written code of ethics. This feeling reached its climax at the meeting of the Society in Cincinnatti, in 1854, and a committee was asked for which contemplated a thorough reform in professional intercourse. M. B. Wright, M. D., one of the leaders in this enterprise, was placed upon the committee, and made a report to the Society held at Zanesville last year. The report was read and discussed. The motion to *adopt was lost.* Out of courtesy, however, to its author, it was ordered to be printed with the transactions. The transactions not appearing for the want of funds in the hands of the publishing committee, the author has issued a pamphlet of some twenty-four pages, containing his report.

Besides the report, the pamphlet contains an *appendix* stricturing the course of those who had had some agency in opposing the schemes of the committee.

So much for history; now for a word in the way of comment.

What is this code of ethics, against which the author of the report before us has proposed so many objections? In a former communication, we stated that it was a digest of the opinions of the good and great of the profession as to the rules which should obtain in professional intercourse. No one ever claimed for these rules perfection; nor has it ever been imagined that they would always be respected. The latter is not the case with reference to anything analogous, human or divine. Good men aided, as it is said, by inspiration, have given a code of laws for the moral and spiritual government of the world; and good men have also given a code for the regulation of our moral and social relations. Some contend that the former is amply sufficient, covering all the ground that it is proper law should occupy. Among this number we find the author of the report on ethics. The *"higher law"* with him is not only paramount but sufficient for all the emergencies of human intercourse. Trust to that, he would say, for the regulation of nations, states, cities, towns, as well as for all kinds of professional intercourse. What a pity it is that the author of such notions had not lived in days of old when he might have corrected the stupidity

of the law-makers—nipped their work of supererogation in the bud. We can imagine him at the elbow of Justinian when the latter was framing the *Corpus Juris Civilis*, whispering unto him thus: "Man! man! the longitudinal diameter of thy auditory apparatus is too long." Badinage aside, we have heard no doctrine broached so much at war with the experience and judgment of our race on good order. An age, however, this certainly is, uncommonly prolific in the development of every species of sophistry. The rule, "*dictum de omni et nullo*," is no longer the test of things in ratiocination. Enterprises, moral or social, now move not because of their truth, their worth, but according as they happen to agree with the whims, crotchets, or perverted tastes of the community. It was no hard matter to get up Mormonism. One of its recommendations was that it superceded human government, human laws; and in this respect, as a system it would derive support from the logic and rhetoric of the chairman of the committee on Medical Ethics. Another of its recommendations was that it allowed of a plurality of wives. It has been no dificult matter either to find the taste to which this feature is exactly adapted, individuals who like the system purely on this account. The same may be said of every other humbug in the country. There is indeed the material among us, however unconscious we are of its existence, for the support of any and everything, it matters not how ridiculous or much opposed to good taste, good order, or the true interests of humanity. It is only necessary that some one who possesses a little low tact, assume the name of "Reformer," make his obedience to the whims, prejudices, etc., in order to be able to call forth all the responses he desires.

It is nevertheless a happy circumstance that such moves upon the "checker-board" of society have but an ephemeral effect. The player, although he succeeded in taking a "man" or two, soon finds his way hemmed up, and is compelled by despair, often in disgrace, to abandon his game.

Our friend, the chairman of the committee on Medical Ethics, may find for a while material enough in the medical profession that for the time will chime in with him in his imaginary schemes of reform, but it is of that character that will serve him only until the effervescences of humbuggery throw something to the surface still more to their notion.

The chairman of the committee, besides his report, publishes also an "*appendix.*" In the latter he makes some demonstrations in the character of a *critic.* We were prepared for almost anything from the "chairman of the committee" in the way of characters except this, and all the reply we have to make in behalf of that microscopic granule of ourself, which in his estimation he has left unannihilated, will be found in the old maxim, "*Ne sutor ultra crepidam.*"

New Journals.—Since our last issue, we have received the *Cincinnati Medical Observer*, edited by George Mendenhall, M. D., Jno. Murphy, M. D., and Edward Stephens, M. D. It is a monthly of 48 pages—terms $2.00 per annum.

The mechanical execution of the two numbers before us is very creditable. The original articles, selections, and editorials, are of a character that will be appreciated by the medical reader.

The object of this journal is, we suppose, among other things, to advance the interests of the school with which two of the editors are connected—all right—also to spread medical information, and contribute to the purity and dignity of the profession.

Ranging perhaps under the last of these heads, is an editorial in the February number, stricturing the course of Prof. Blackman, of the Ohio Medical College, for inviting the editors of the Cincinnati Commercial to be present during the performance of surgical operations in the Commercial Hospital. No one ought to know better than Prof. B. that such a procedure is contrary to the "Code of Ethics," and "among the ordinary practices of empyrics," and if he has thus offended, he should not complain for being exposed.

While such conduct is highly reprehensible, it is nevertheless a grave question whether attempts to correct it and other acts of similar character, redound to the welfare of the profession. In the social circle, in our intercourse with our patients, and in our meetings with our brethren, we see much not in good taste, much not in harmony with private or public welfare, much indeed that is offensive and objectionable. But who is there so soft in the upper story, so reckless of his vocation on these mundane shores, as to suppose that his exposure of such things, wherever and whenever found, will bring about reform? Exposure is of very doubtful efficacy, so far as reformation is concerned. Preaching depravity—laying bare

what is regarded as the corruptions of the human heart, never yet saved a sinner worth saving. The proper course for the correction of all those minor offences would seem to be to preach the truth, preach propriety, and trust their observance to their own intrinsic force and worth.

Besides the impolicy of the course of "*coming down*" upon all the little matters that are improper or heterodox, there is among medical men a still weightier objection. Such a course is at once regarded as "a declaration of war" by the party assailed, and measures of defense at once concocted, not only to repel the assailant, but to "carry the war into Africa"—a battle ensues, which, after being waged for a greater or less period, the parties make the discovery that neither themselves nor the profession have been benefitted. While, therefore, we may admire the boldness—the moral nerve that prompts an attack, we fail to see how it harmonizes with discretion.

Nostrums—Human Nature.—A bill has been introduced into the Legislature the object of which is to suppress the sale of nostrums. What its fortune will be we are now unable to determine. There are about twenty physicians in both branches of the Legislature, mostly gentlemen of influence, and from this circumstance we might be inclined to expect that the bill will become a law. That it will remedy the trouble, provided it does pass, is quite another question.

A department of nature, that is often cultivated with industry, because of its supposed availability in the ordinary affairs of life, we speak of under the denomination of *human nature.* It is a portable unalienable; something upon which the savans have been always descanting, and yet what do we know about it? Intercourse and communion *with*, and demonstrations *of* it, we have every day, and yet who has ever been favored with the potency and pliability of thought to look into it, and the gift of language to describe it. Once in two or three centuries an individual makes his appearance who possesses a faint knowledge of some of its phases. Upon these he operates to accomplish his purpose, good or bad, takes the name of *divine benefactor* or *impostor*, as the case may be, and whole communities, states and nations follow after him. Novi-

ces are of more frequent occurrence—operate on traits less general, and every day, in a variety of ways, are making their demonstrations, Such proceedings take the name of truth or *reform* while in blast; error, sophistry, etc., after they have passed away. The knowledge gained by the operation amounts to nothing, for the disappearance of one scheme is generally the signal for the commencement of something else of the same, or similar kind. What is still worse, the same thing, however unworthy, is often repeated by each successive generation. Every individual must go over the whole ground—must learn the lesson for himself. History professes to direct in the paths of wisdom—Egypt, Greece, Rome, France, Britian, America, are so many mirrors that reflect anthropology—human nature. Looking over the map, we recognize, here and there, a Plato, a Socrates, an Aristotle, a Gallileo—men who understood themselves; and the import of the things with which they were surrounded—while the masses appear intoxicated, delirious from sophistry, distorted facts and partial truth.

The following shows the ground upon which the Supreme Court of Ohio reversed a judgment against David McConehey, an account of whose trial constitutes the leading article of the present No. of the Journal. This decision is correct in separating drunkenness from delerium tremens, so far as responsibility for the commission of crime is concerned, and other reasons might be added to those given by Judge Bartley:

"SUPREME COURT OF OHIO, Thursday, Jan. 10, 1856.

"*David McConehey* v. *The State of Ohio.* Writ of error to the Court of Common Pleas of Muskingum county, to reverse a judgment against the plaintiff in error, on an indictment for the crime of shooting with intent to kill. BARTLEY, J., *Held*—

"1. That while drunkenness creates no exemption from criminal responsibility, and may even exaggerate the turpitude of guilt in some cases, *delerium tremens* or *mania a potu*, although the result or consequence of continued intoxication is *insanity*, or *a diseased state* of the mind, which affects responsibility for crime in the same way as insanity produced from any other cause.

"2. The reason that intoxication creates no exemption from criminal responsibility, does not apply to *delerium tremens*, which, although

like many other kinds of mania, the result of prior vicious indulgence, is always shunned rather than courted by the patient, and is not voluntarity assumed, either as a cloak for guilt, or to nerve the perpetrator to the commission of crime.

"Judgment reversed and cause remanded to the Court of Common Pleas."

Western Journal of Medicine and Surgery.—This Journal, started in Cincinnati in 1828, by the late Dr. Daniel Drake, who was for a long time its editor; and for the last ten years issued from Louisville, under the editorial charge mostly of Dr. Yandel, is, we understand, about being changed into a Quarterly, with Drs. Gross and Richardson for its editors.

To the Journal we have always been much attached. We made it the principal vehicle for a number of years for our excursions among the brethren of the profession, and although we have no further use of that kind for it now, we feel, nevertheless, every time that it makes its appearance, as if we wanted to take another ride.

As journalists, this favored land of ours has never had two that were abler than Drs. Drake and Yandel. Possessed of proper dignity, without which no enterprise of the kind can succeed and become a permanent fixture, they both were adepts in distinguishing reason from sophistry, truth from falsehood, realities from appearances; and to such parts we may attribute the success of the Journal for more than a quarter of a century, a period, too, more fertile in the way of additions to and substractions from our stock of knowledge than any other of ten times the length in all previous time.

For the proposed Quarterly, there is ample room. We really need something of the kind, and who among us better qualified to stand at its helm than Dr. Gross.

Reports of the Benevolent Institutions.—These, for the year 1855, have been laid on our table, and although we have no room for an analysis of contents in this number of the Journal, we nevertheless embrace the opportunity to bear our testimony to the very able manner in which those situated at the Capital are conducted. Never since their erection has there been displayed by superintendents more honesty, capability and faithfulness.

Introductories.—We have received the "Introductory" of Dr. Jno. C. Dalton, before the class of the College of Physicians and Surgeons, N. Y.; also, that of Dr. Jno. R. Allen, and the "Valedictory" of Dr. P. Spencer, both of the University of Missouri. These addresses do their authors credit. They indicate progress in the right direction. We have also before us the "Introductory" delivered before the class of the Philadelphia College of Medicine, by Jas. Bryan, Professor of Surgery. This address is full of practical remarks. We give the following:

"The fable of the hare and the tortoise is eminently emblematic of the history of medical students and medical men. The longer I live, (says Sir J. F. Buxtan,) the more I am certain that the great difference between men, between the feeble and the powerful, the great and the insignificant, is *energy*, is invincible determination—a purpose once fixed on, and then death or victory. That quality will do anything that can be done in the world; and no talents, no circumstances, no opportunities, will make a two-legged creature a *man* without it."

Commencement of Starling College.—The commencement of this institution was held on the 4th March, in the Second Presbyterian church. The Commencement Address was delivered by the Hon. J. W. Taylor, and the Valedictory to the graduating class by Prof. Carter.

The degree of Doctor of Medicine was conferred upon the following gentlemen:

O. E. Lucas,	J. W. Clark,
J. W. H. Vest,	W. W. Holmes,
S. A. Crooks,	C. McNeal,
S. G. Richards,	E. O. Jones,
M. Hawes,	J. J. McIlroy,
A. C. McNutt,	D. L. Ely,
T. S. Case,	J. H. Olds,
S. W. Ranney,	L. Smith,
J. L. Mounts,	J. R. Wilkins,
S. S. Ford,	G. F. Cassidy.

Here are twenty young men who have been pronounced upon as being qualified to commence the duties of physician and surgeon.

Supposing them now to average twenty-five years of age, and that they will live to the age of fifty-five, the average period of a physician's life; and supposing further that each one succeeds to the usual amount of business, they will occupy the professional stage for more than a quarter of a century and have continual charge of the diseases of twenty thousand of our population. Viewed from such an angle, the responsibility of authorizing even this number to exercise the duties of the healing art should be very seriously regarded.

With respect to these young gentlemen, as a class, we must say they give promise of great future usefulness, and we sincerely hope that they all may be equal to the emergencies that they will so frequently be called upon to encounter.

The honorary degree was conferred upon S. P. Hunt, of Morrow, Warren county, Ohio, and Isaac Hoover, of Belmont county, Ohio.

Obituary Record.—Thomas Copeland, Esq., author of the well known work on "Some of the Principal Diseases of the Rectum," died at Brighton, in November last, aged 74.

M. Berger, Dean of the Faculty of Accouchers at Brussels, died not long since.

Died, at Petersburgh, Va., Dec. 6, 1855, in the 40th year of his age, Dr. Jno. F. Peebles, one of the editors of the Virginia Medical and Surgical Journal. Of the Faculty of Petersburgh, Dr. P. was one of the brightest ornaments.

DEATH OF MR. SHELDEN.

It is with regret that we record the death of Mr. R. A. Shelden, which occurred in this city on the 8th February last, in the 40th year of his age. Mr. Shelden was a native of the State of New York, where he served an apprenticeship to the carpenter business, and also studied the art of Architecture. He came to this city in 1849, and resided here until the time of his death.

Mr. Shelden was in many respects an uncommon man. Endowed by nature with more than an ordinary proportion of energy, he, by the cultivation of good habits, rose from the humble position of an apprentice to the highest eminence in the art of architecture. The noble edifice of Starling Medical College, a building unsurpassed by any other in the world for the purposes for which it was designed, and an ornament to our city, is the result solely of his architectural

skill. To him, also, our city owes much. He gave an impulse here to taste in the construction of dwellings, public edifices, etc., that is now seen in our superiority in these things as compared with other cities of much larger population. In the death of such a man, there is not only a bereavement to family and friends, but a loss to community not easily repaired. The presence at his funeral of a large number of our best citizens, testified their sense of his many good qualities, and the services rendered by him to society. *Requiescat in pace.*

American Medical Association.—The Ninth Annual Meeting of the American Medical Association will be held in the city of Detroit, Michigan, on Tuesday, May 6th, 1856.

The secretaries of all societies and other bodies entitled to representation in the association, are requested to forward to the undersigned correct lists of their respective delegations, *as soon as they may be appointed;* and it is *earnestly* desired by the Committee of Arrangements, that the appointments be made at as early a period as possible.

The following extracts are from Article 2d of the Constitution:

"Each local society shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half this number.

"The Faculty of every regularly constituted Medical College or chartered school of medicine, shall have the privilege of sending two delegates. The professional staff of every chartered or municipal hospital, containing a hundred patients or more, shall have the privilege of sending two delegates; and every other permanently organized medical institution, of good standing, shall have the privilege of sending one delegate.

"Delegates, representing the Medical Staff of the United States Army and Navy shall be appointed by the Chiefs of the Army and Navy Medical Bureau. The number of delegates so appointed shall be four from the army medical officers, and an equal number from the navy medical officers."

The latter clause, in relation to delegates from the army and navy, was adopted as an amendment to the Constitution, at the meeting of the association held in New York, in May, 1853.

WILLIAM BRODIE, M. D., Detroit, Mich.,
One of the Secretaries.

Receipts.—The following are receipts for the Journal not otherwise acknowledged. Of Dr. J. B. Johnson $5, Dr. Higgins $4, C. H. Spahr $2, A. C. McGlaughlin $4, Wm. T. Sharp $2, A. L. Shaffer $2, E. Collins 2, Dr. C. C. Sams $2, J. P. Bywaters $2, Dr. A. A. Patten $2, J. M. Gillespe $2, S. Martin $5, J. T. Houstan $4, L. A. Hamilton $2, W. C. Morrison $8, D. W. Henderson $2, A. Merriman $4, C. H. Weaver $2, T. W. Jones $4, T. M. Cook $2, A. Baker $2, S. S. Gray $2, Wm. W. Mills $2, I. McElroy $2, A. E. Bell $2, O. E. Lucas $2, W. C. Gildersleave $2, A. D. Witherall $2, A. C. McNutt $2, Dr. Jones $2, T. I. Sache &2, W. A. Clark $1, Joseph Parker $3, J. C. Richardson $4, J. W. Hearst $1, E. L. Miner $2, W. S. Newton $3, S. S. Reeves $5, T. W. Gorden $2, J. McCallen $3, J. D. Nourse $5, R. M. Brayton $6, D. D. Moor $3, D. M. L. Singray $2, Drs; Russell & Thompson $2, E. Thorn $2, J. Huestes $2, J. W. Griffith $2, A. Dunlap $3, — Baldrege $1.50, A. Plumbley $4, M. W. Osborn $2, R. S. Conner $2, J. P. Henderson $2, J. K. Leedy $6, C. Huston $2, H. Culbertson $2 C. G. McKingley $2, J. B. Evans $2, J. J. Shannon $2, Wm. N. Briggs $2, A. J. Bennet $3, R. B. C. Newcomb $2, J. M. Hodge $4, A. Hurd $4, G. W. Bargdoll $1.

Notes on Medical Subjects. By L. W. Trask, M. D., Hiram, O.

1. Results of Quackery.—It is quite amusing to see the multiform systems of quackery trying to rise on the demerits of the common practice. If the regulars did not use quinine, calomel and blister plaster, what would the medical reformers do? They would certainly be obliged to retire from the field; for they invariably endeavor to build themselves up by tearing somebody else down.

One thing strikes every body with astonishment: in localities where the regular practice has been mostly superseded, there is still more than the former percentage of mortality. This is opening everybody's eyes. It is evident that the plausible substitutes are not maintaining their reputation, and must be changed for others, or the game would be at an end. In this way, quite a number of contradictory infallible systems may yet be introduced to the public. I do not see any great cause of alarm in the "kite sailing" operations of the new medical parties. They find too much fault with others, and boast too much of what they are going to do. We shall see some rare fun when they are called upon to redeem their

promises. They secure attention by claiming that medical practice needs improving, and then bring forward a new system as a reform. I have lately been endeavoring to ascertain what results have been gained. I find the following: 1st. "Heat is life and cold is death." THOMPSONIAN SYSTEM. [Then an iron wedge can be made a living being!] 2d.—"Similia similibus curantur."—HOMEOPATHY. ["A little hair of the same dog cures,"—a very biting result.] 3d. "All safe remedies are in the vegetable kingdom."—BOTANIC SYSTEM. [How the Creator slighted the other kingdoms; this discovery shows great penetration.] 4th. "Water, as a remedial agent, should supersede every thing else."—WATER CURE." [This takes the crown from the vegetable kingdom.] 5th. "Medicine should be prepared for the million, from stereotyped recipe."—PATENT MEDICINE SYSTEM. [This has the merit of being labor-saving: all the hard work can be done by steam power.] 6th. "Nature shows the clearest indications in the urine."—UROSCOPY. [This seems to be a branch of the water-cure; what a great mistake we have made in feeling the pulse and looking at the tongue! We ought to be ashamed of forgetting all about the laws of gravity!] 7th. "The Indians alone have a correct knowledge of medicine."—INDIAN DOCTOR. [This is no more absurd than many other things we hear.] 8th. "The Thompsonian system, re-baptized and perfected, seeks to crowd all others from the track."—ECLECTIC SYSTEM. [Very likely; an old boot, re-vamped or foxed, has been sold for a new one.] 9th. "Medical science only becomes intelligible and reliable in the next sphere."—SPIRITUAL SYSTEM. [Then let the patient send to the other world for his doctor, and get one that knows something: this is truly a novel result.] 10th. "Let folks say what they please, tea-physic and drops do all the cures."—GERMAN DOCTOR. [This has the merit of simplicity and certainty.]

We can now see the ground covered and the results attained by the reformatory systems of the day. It will certainly require all the "clergymen, lawyers and editors" in the world to sustain them. They are so contradictory and absurd that they will destroy themselves soon enough. No monopoly of medical practice ought to be expected; we live in a free country, where every one has a right to have his own way.

HOBBYISM.—Nothing has ever injured our noble profession more than this. Doctors, like other men, are too much inclined to be indolent in investigating, and if they find that a remedy is useful in

treating one disease, they assume that it is indicated in all others. This saves the trouble of thinking, and a practitioner can slide along on a kind of medical railroad at the rate of sixty miles an hour. Many very valuable medicines, including calomel, have been abused in this way. Twenty-five years ago, it was held that every case of fever should be treated by active ptyalism. How absurd! It was very justly considered by the public, that in many instances, the remedy was worse than the disease. Sound discretion is just as necessary in the practice of our art as in any other kind of business.

A mere routine practice is, also, carefully to be avoided. It is a great mistake to treat a mild case with the same heroic remedies that a severe one might require. Never waste medicine. We should never fall into the error of supposing that a patient is to be carried through a sickness solely on the strength of medicines. Due compliance should be reposed in the recuperative powers of nature—a matter not sufficiently insisted on by any medical authors—for it ought to be admitted that nature is the greatest doctor of us all. We might, also, sometimes think of this: "The three best doctors are Dr. Diet, Dr. Quiet and Dr. Merryman." Making a suitable allowance for such things, I still hold, after twenty-six years practice, that prudent and well adopted treatment is very beneficial and not safely to be dispensed with. Should I live to take off my medical armor, and retire from the field, I do not intend to boast, as I have heard some old physicians, that all my best cures were performed with dough pills! This would be gratuitously disgracing the medical profession. I think we have been injured more by friends than foes.

4. Phonography—Its Importance to Medical Men.—The days of theory and dogmatism are rapidly passing away. Finalities are scarcely recognized, and authorities, once so potent, are now considered valuable only as showing the current sentiment of the profession. We are the true Eclectics—"Our field is the world," and we have the privilege of choosing from its inexhaustible variety and profusion. Every physician should be a close and accurate observer, and hold the pen of a ready writer. We need more properly recorded observations. But here is a difficulty: our time is very precious, and the old slow way of writing is a great disadvantage. Phonography, or the "Literary Locomotive," is just what is wanted. It is based on the phonetic principle, and is the invention of Isaac Pitman, Bath, England. Let me try to explain it in a few words:

The phonetic alphabet consists of forty-three letters—one for every elementary sound. Now, if simple characters, (straight lines and curves,) that can be made by a single movement of the pen, were substituted for the common, complicated writing-letters, (requiring, on an average, five movements,) we could represent an elementary sound by every movement of the pen—a gain of five hundred per cent. And then by using word-signs (made by a single stroke of the pen) for all words of frequent occurrence, a further gain could be effected of one hundred per cent. Total gain, six hundred per cent.; or, in other words, a man could write six times as fast and have his writing just as legible. For instruction-books, address Longley Brothers, Cincinnati, Ohio.

December 20, 1855.

A Trip to Europe. By J. C. Reeve, M. D., Dayton, Ohio.

The number of students availing themselves of the advantages presented by the universities of European cities, is annually increasing. This does not arise from a lack of good schools and good teachers in our own country, for it will generally be found that those who travel abroad for medical instruction, are those who have availed themselves most liberally, of the advantages of home. The facility and cheapness of travel, are undeniably great causes for this increase; the novelty of travel, and the associations belonging to the old world, are additional attractions. While it cannot be denied that in a professional point of view, they can avail themselves of the teachings of men of the greatest eminence, and of advantages for medical instruction, presented by an over crowded population, and which cannot be found where this does not exist.

The great majority of those who go to Europe for medical study, go to Paris. In this they are influenced by the great and deserved reputation of its schools and teachers—by the supposed greater cheapness of living there than elsewhere, and the presence of a large body of their countrymen, engaged in the studies they are themselves to pursue. There seems to be an absence of information in regard to other places, which it is the object of this article to supply, by giving the results of some experience upon the subject, for the benefit of those who may be contemplating such a trip.

In my opinion, the universities of the smaller towns of Germany, present advantages to the medical student, well worthy of consideration. In these advantages, I need not urge the disadvantages of Paris, or any other place; some of those incident to the French capital, were very well presented in an article, published in the January number of our Journal, and was the "exciting cause" of the present communication. All the arguments against large cities as places of education for youth become just as much stronger in regard to Paris, as that city is gayer, and more abounding in pleasures and vices, than other cities. Before attractions so varied and powerful—seductions so alluring and irresistible as are there presented, the best resolutions give way—books are thrown aside—the dissecting room deserted, and if the student still attend the hospital, he is ill fitted for acquiring information, after a night at a *bal masque*, or at the *Chateau des Fleurs!* Everything is the reverse of this in the country universities of Germany. The most favorable circumstances for study surround the student—refined society—the quietest population and the pleasantest rural scenery; the attractions of weak tobacco, and weaker beer, are not likely to distract him, and if anything be lacking in his progress, it is in himself alone.

In regard to the acquisition of the necessary language, much greater facilities can be had in any country town here, in the study of German and French; and every student should have some knowledge of the language of the country he is going to before he leaves home. After its acquision, again, the former is of daily use to the physician practicing here, while the latter he will scarcely ever have an opportunity of using in his business transactions, and this is a subject of no small importance.

To say anything in regard to the character of the Universities of Germany, is entirely needless; it is too well known throughout the world, and their professors have too long been among the most eminent teachers and discoursers, in every department of science, literature and art. The universities of Jena, Strazburg, Giessen, Lipsic and Heidelburg, have existed for centuries, while those of Bonn and Gottingen, although of more modern foundation, are not inferior to the others, either in regard to the talents of their professors, or the number of students attracted to their halls. Some of the most eminent men in the ranks of the medical profession, are in the smaller towns of Germany. There are Liebig, Kolliker, Scanzani, and Naegelae, and at Gottingen alone are Wagner, the Physiologist,

Wohler, the chemist, Siebold, the obstetrician, and Hanle, the anatomist and pathologist; all standing among the highest names in the annals of medical science.

The system of education pursued in these universities, is one which has resulted from the experience of many centuries, and the student will scarcely find a better. The relation between professor and pupil is almost paternal; this arises from the great division of labor in teaching, the consequent diminution in size of the classes, and the immediate contact in which student and teacher are thus brought. In all these universities there are many ambitious young men, who, having fully prepared themselves upon any subject, are allured to give courses of lectures on the same terms, as the older men with well established reputations. If they can present to the student better advantages by reason of the greater amount of time and attention they can devote to him than the older professor, they will secure his attendance, while the older professor is not injured, for his salary is paid by the state. Thus, there were four or five courses of lectures on obstetrics, delivered at Gottingen when I was there, attendance on either of which, was equally of service in getting a degree; the "lesser lights" took so many students, that there were not more than seventy-five in attendance at Siebold's lectures, and not more than a dozen in his chemical class. In this manner, auscultation and percussion and microscopical anatomy, are admirably studied—there is a teacher for every half-dozen students, with ample time and opportunity. The student thus brought under the immediate eye of the professor, he needs but one thing to secure his favor—*diligence;* but one thing to gain admittance into his family —*good behaviour.* The influence of eminent men, such as I have mentioned, in forming the character of the young man, cannot be over estimated.

But it may be asked, "are there hospital advantages enough in such towns for the study of medicine?" The number of cases in the hospital certainly cannot compare with those in Paris, London, Edinburg or Dublin; but it is not the number alone, (nor the *rarity* I may add,) of cases, which best secures the student progress in his profession; the careful study of a few cases of well marked disease, result in ten-fold more benefit, than a hurried glance at many. Of this fact the student may be well assured wherever he goes—he must give close attention to the symptoms and treatment of cases to learn practice, and this he cannot give to many at once. Let him

walk through any of the professional museums of the large capital, following no particular course, and he will find that he is confused and bewildered by the number of objects he has seen—he remembers nothing of value—a hideous monstrosity or two, alone remains fixed upon his mind, and he leaves a rich mine of professional knowledge, as poor as he entered it. It is the same with the hospitals. There is another fact which the student had better learn before he leaves home, than to learn it by experience, which he otherwise soon will do, after he commences his hospital attendance. It is, that the greatest amount of professional information, cannot generally be obtained, by following the most eminent teachers. However desirable it may be to hear their instruction, the crowd which always follow such men through the ward, renders it impossible to do so. The student sees the case at the first visit after its admission, and becomes interested in it; but next day he cannot get near it, perhaps not near enough to hear distinctly what is said, and in a few days it is gone—dead or discharged, and he has not been able to observe the course and treatment of the disease. This is the case in regard to Fergusson, Erichson, Lawrence and Stanley, of London, and Velpeau and other eminent professors of Paris.

There is one other advantage which German scholars have which it needs no apology for presenting. The circumstances of medical students in our country are not generally such as to make them heedless of the expense incurred, and it is in this respect that I believe these schools are far to be preferred to those of any other part of Europe. Living is certainly cheaper in Germany, in such towns as Heidelberg, Gottingen and Bonn, than can be possible in a large city. Upon this point I had prepared some figures, but this article has already extended itself too far to allow it, but I believe the expense of attendence at such universities to be as much cheaper than living in Paris, as Paris is cheaper than London. As a general thing, a person can live in Germany for about as much as he can in any of our towns in Ohio.

But in choosing any part of Europe as a place for medical study, the student should first decide upon what particular object he is going to pursue. If to follow some *special* disease, the immense hospitals of Paris present undoubted advantages over every other point. If some branch of professional study, such as physiology, chemistry, microscopical anatomy, the schools of Germany present as good teachers and as great advantages, at much less expense,

than any other part of the world. But if the study of *therapeutics* is his object—the application of remedies to the cure of diseases in their general every-day occurrence, I would prefer the hospitals of Great Britain far above all others. In them are spoken our own language, the professors are the authors of the text-books we study as students and the monographs we use as practitioners—they are *Anglo-Saxons* like ourselves, and carry the *practical* characteristics of the race into the treatment of disease, which is neither refined to the almost entire expectancy of the French mode, nor encumbered with the complicated preparations of the German pharmacopiae. In the hospitals of Dublin, Edinburgh and London, we believe are to be found the best advantages for the general treatment of disease—advantages worthy of the extra expense it is necessary to enjoy them. R.

DAYTON, Ohio.

DEATH FROM CHLOROFORM.—We have to record another death from the inhalation of chloroform. It occurred in Boston. The exhibitor, Dr. Emery, publishes the following statement of the case in the *Boston Journal:*

"Between the hours of 1 and 2 o'clock, on the 5th inst., I commenced to administer chloroform to Mrs. P. A. Morgan, at her request, for the purpose of removing some teeth. I commenced with a small quantity—should think from two to three drachms, on a sponge. She inhaled it without difficulty for a minute or two. Her pulse was not strong, but uniform. She then commenced to be excited, and said that I was going to extract her teeth, and she should know all about it. She said that Mrs. Paige (the lady who accompanied her) was getting the forceps to extract them with. I think about one minute had passed during this conversation and excitement. I then removed the sponge from her mouth, and in a few moments she became quiet, and satisfied that there had been no attempt made to remove her teeth. In a few moments I commenced the operation again, with the same amount of chloroform. She inhaled it without difficulty about as long as she did before, and became so much excited that she got up out of the chair, and insisted that I had extracted her teeth. She spit on the floor and looked to see if it was blood, and she insisted that some one was coming into the room whom she did not wish to see. I sat her

down in the chair again, and she then went into a spasm, closed her teeth and breathed with difficulty. I sprinkled water on her face, and the muscles relaxed, and I asked her to get up and we would place her on the lounge. She made an effort to rise, and, with my assistance, stood on her feet, and then instantly sank to the floor. With the assistance of Mrs. Page, I placed her on the lounge, and then there was a rush of blood to the brain. I sprinkled water in her face again, but she showed no signs of being conscious. Mrs. Paige went for assistance, and I immediately commenced artificial respiration by insufflation, and kept it up until Dr. Stedman came in, which was but a few minutes."—*Medical News.*

Lard as an Antidote to Strychnia.—Dr. D. F. Fetter, of Croton Falls, N. Y., writes to us as follows:

"In the number of the *American Journal of the Medical Sciences* for October, 1855, there is an article in relation to the effect of lard as an antidote to strychnia. Some time during the past summer, I undertook to poison a dog by giving him ten grains of corrosive sublimate in butter. I gave it in the evening, and expected to find him, in the morning, dead, but was surprised to see him alive. I then gave him three or four grains of strychnia in butter, and it failed to have the desired effect, when I gave him another dose in meat, which proved fatal in about fifteen minutes."

We must add that Dr. W. G. Thomas, of Camden, N. J., states (*Medical and Surgical Reporter*, Jan. 1856,) that he was induced to repeat Dr. W. N. Pindell's experiments (see *American Journal of the Medical Sciences* for Oct. 1855, p. 541,) and with different results. He first tried olive oil. All the cats experimented on died in from five to fifteen minutes. He then tried lard; it also failed. The animals experimented on (dogs and cats) expired in about the time usually observed in poisoning by strychnia.—*Ib.*

Ovum in Ovo.—Dr. J. F. Read, of Fairfield, Greene Co., Ohio, writes to us: I see, in the November number of *News*, "a remarkable case," as you style it, of an "ovum in ovo." You say, you "do not recollect to have heard of one before which had a separate calcareous covering." If they are of such rare occurrence, allow

me to offer an occurrence, with some similarity, occurring in the egg of a goose. The enveloping egg was of uncommon size—attracting attention by its dimensions—with a shell of less firmness than usual. It would be classed with what is usually denominated "soft shelled eggs," though offering considerable resistance upon pressure. It was symmetrical, well filled, though admitting of sufficient compression to detect some hard substance. Upon rupturing the outer membrane, with its thin, calcareous deposit, it was found to contain about the usual quantity of albumen, surrounding a well formed egg, of the average size, and covering of more than usual resistance. The diameter of the contained egg corresponded with the outer, and were not opposed to them as they were in the case reported. The arrangement of the contents of the inner egg did not differ from what we usually see.—*Ib.*

Diabetes Mellitus.—The physiology of sugar in the system has recently undergone so many changes, that diabetic sugar in the urine in patients, attracts unusual attention. A case of this kind has been under the care of Dr. Bence Jones, at St. George's, for some weeks; and as this physician shows his class, week by week, the changes in the amount of sugar, resulting from changes in animal and vegetable diet, treatment, &c., and explains the copper and other tests for glucose, such patients possess no unusual interest for students. Diabetic sugar is never generated from milk sugar, though it need scarcely be remarked it is quickly formed from other products very nearly allied, such as albumen, starch, or vegetable sugar. Diabetes is more under the control of regimen than medicine. Milk is a very proper diet for diabetic patients. Dr. Bence Jones observed in this case, though milk abounds in sugar, some physicians, since the researches of Bernard and Lehman, seem inclined to look on the disease as not so much a new formation of sugar as an accumulation of that always forming in the normal state, and in some way obstructed in its exit, like ursa or bile in the system. Dr. Pavy, of Guy's, believes he has found that diabetic sugar is a specific form, different from other modifications of glucose. It seems very well established, that the sugar of the liver is formed from the albuminous products of the blood of the

portal vein; and still more recently, it has been observed that fibrin and hæmatin, disappearing, also, in the liver, whether as the result of tuberculous or inflammatory crasis of the constitution, may give rise to sugar. Some other recent researches would point to diabetes as a peculiar form of nervous disease, rather than a renal or hepatic affection, the kidneys only acting in a secondary point of view. In hospitals, also, it is sometimes found that albumen and sugar alternate in the same urine, still further indicating a connection between these two substances in the portal system. Among recent remedies, gluten bread has been much recommended, but fine bran bread is preferable. Maccaroni is also highly praised. Among medicines, citrate of ammonia and opiates are perhaps the best.—*Lancet*, Dec. 29.

Bright's Disease of the Kidneys.—The very great usefulness of the liquor ammoniæ acetatis, in cases of Bright's disease of the kidney, deserves to be more generally known than it is. We sometimes see this affection given up as beyond all cure; yet, at Guy's Hospital, where the affection was first discovered, and since then has been most carefully studied, Dr. Addison has found the liquor ammoniæ acetatis, by acting on the skin, and relieving the congested condition of the kidney, the best of all the remedies for this disease; diuretics at the same time to be strictly avoided, but not mercurials.—*Ib.*

Varicose Veins.—In a very marked case of a patient with varicose veins, in St. Bartholomew's, recently, Mr. Skey placed a dozen small issues with the potash paste along the *trajet* of the enlarged venous trunks, with the very best possible effect; the issues healed up very kindly, and the varicose condition of the large trunks of the lower extremity disappeared *pari passu* with the action of the issues. Mr. Skey believes this to be the best of all the plans for treating this troublesome affection.

In two similar instances under treatment in University College Hospital, Mr. Erichsen placed ligatures on the veins, the only precaution that is necessary, he said, being not to transfix the vein, or

suppurative phlebitis might be set up. The operation will be quite safe if, in passing the twisted suture, the surgeon keeps *beneath* the vein; if blood passes out, the vein will in all probability be transfixed. Both cases have done well.—*Ib.*

Pregnancy of the French Empress.—The pregnancy of the Empress of the French is an event scarcely second to any of the present age in importance, not only to the destinies of France, but to the interests of Europe and the world at large. Sinister rumors have been set afloat in Paris by those disaffected to the Bonapartist dynasty; and it is in the highest degree imperative that the gestation of her Imperial Majesty, and the birth of a direct heir to the Empire, should receive the highest scientific attention, and be watched with the greatest and most impartial assiduity. We alluded to this subject in the last number of the Lancet, and we are informed, on good authority, that Dr. Locock wishes it to be mentioned, that certain of the points referred to by our "Correspondent," are not entirely correct. The Empress was in this country in April last, and we believe Dr. Locock was consulted at that time, and he was subsequently summoned to the Palace of the Tuileries. The empress Eugenie did not become pregnant until the last week in June. Dr. Locock was first consulted in this country, and he then attended a consultation of distinguished physicians and surgeons in Paris before that auspicious event occurred. Dr. Locock has not yet been requested to attend at the approaching accouchment of the Consort of Napoleon III., he has not, therefore, declined to attend. There are reasons of State in France, for and against his attendance, but if his presence should be called for, we do not see why Dr. Locock should refuse his services.—*London Lancet.*

Diarrhœa.—The root of the blackberry (rubus villosus) which has generally been regarded as a simple astringent, is declared by Dr. Snead, (Southern Medical and Surgical Journal,) to possess most valuable tonic properties, and he recommends it as a warm astringent tonic in chronic diarrhœas and dysenteries. The fresh root should be grated, and a cold infusion obtained.

Fractures of the Femur.—Velpeau says that after fractures of the femur, there is no limping unless the shortening exceeds three-fourths of an inch; and the same is true if the shortening occurs in the tibia. The reason is that the pelvis inclines toward the shorter limb, and thus compensates for the deficiency in length. In speaking of the various contrivances for dressing the fractured femur, he remarks that most of them fail to obviate the shortening, and produce eschars, anchylosis, or troublesome arrests of the circulation. This is the price that is usually paid for the employment of these complicated machines, and a shortening of a quarter to three-quarters of an inch is not avoided after all. The simplest apparatus that will maintain the adjustment of a fractured femur, so that union may take place with shortening of only half an inch, is the best.—*Memphis Med. Recorder.*

Chronic Entropium.—Mr. Wm. Butten reports, in a late number of the Lancet, two obstinate cases of entropium, both of which had resisted a great variety of treatment, but which were cured by the application of collodion to the skin of the eyelid, previously corrugated by the thumb and finger. Several layers are successively applied and allowed to dry before the fingers are removed. The application is made at first every other day, and afterwards at longer intervals.

Hemorrhoids.—Dr. Buckingham (Boston Medical and Surgical Journal) prescribes the pickled unripe pepper as an article of diet for persons who suffer with hemorrhoids. He has often found this treatment successful. Dose, one pepper daily, to be eaten at dinner.

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